Scratch-building a Large Scale Locomotive
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by Cody and Casey Akin

The Prototype

Pre-Construction

- What is your skill level?
- What's in your wallet?
- Check your tool box
- Choose your materials
- Build vs. Buy
- Givens and Druthers
- A go-er or a show-er
- Freelance vs. Prototype
- Choose an Era

- Collect Photographs

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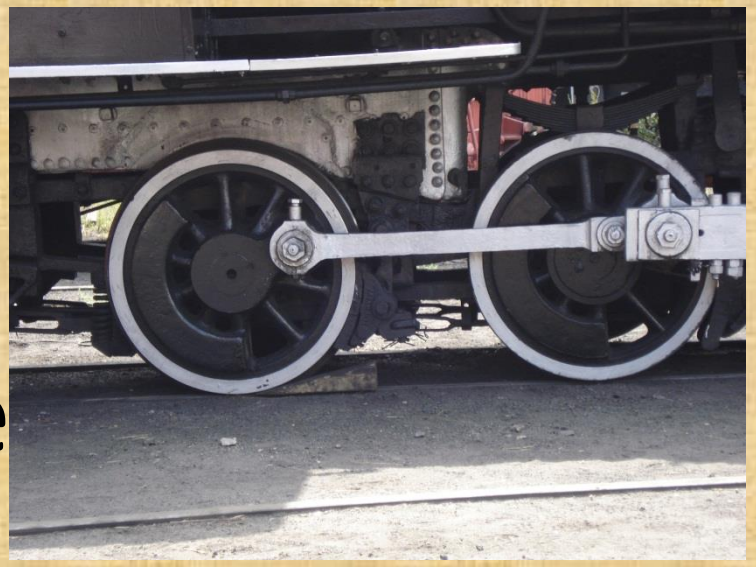


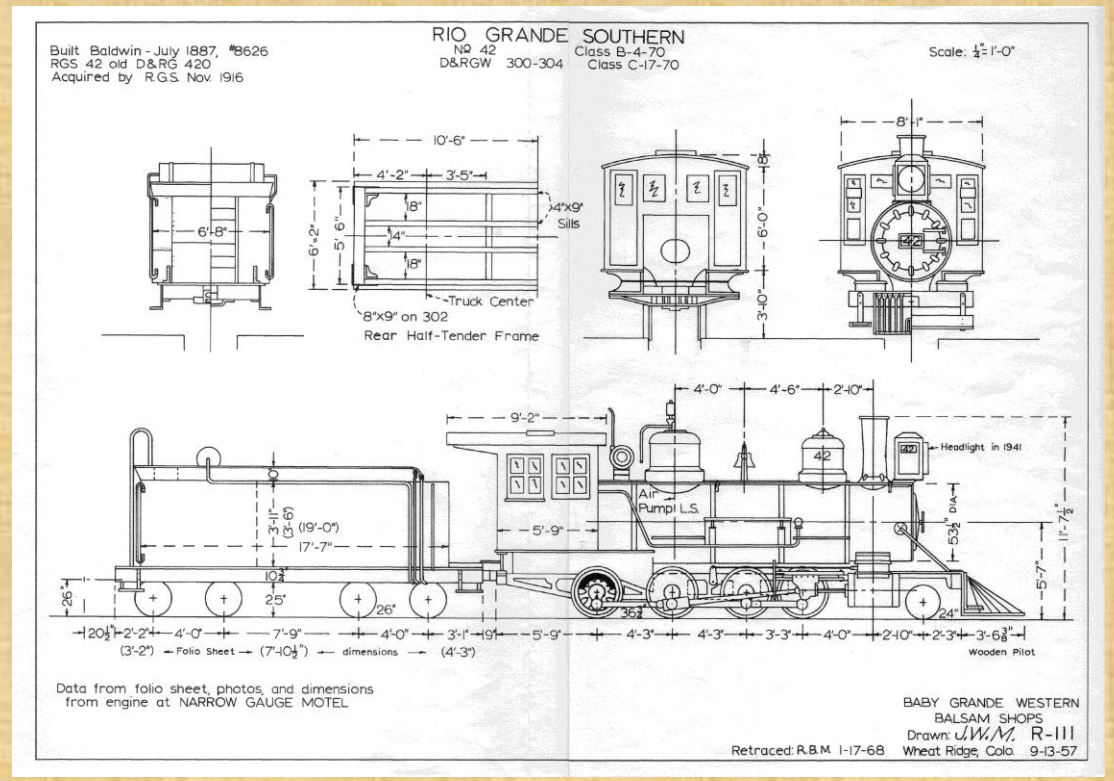
Researching the Prototype

- Collect Photographs
- Take Measurements

Researching the Prototype

- Collect Photographs
- Take Measurements
- Find Drawings

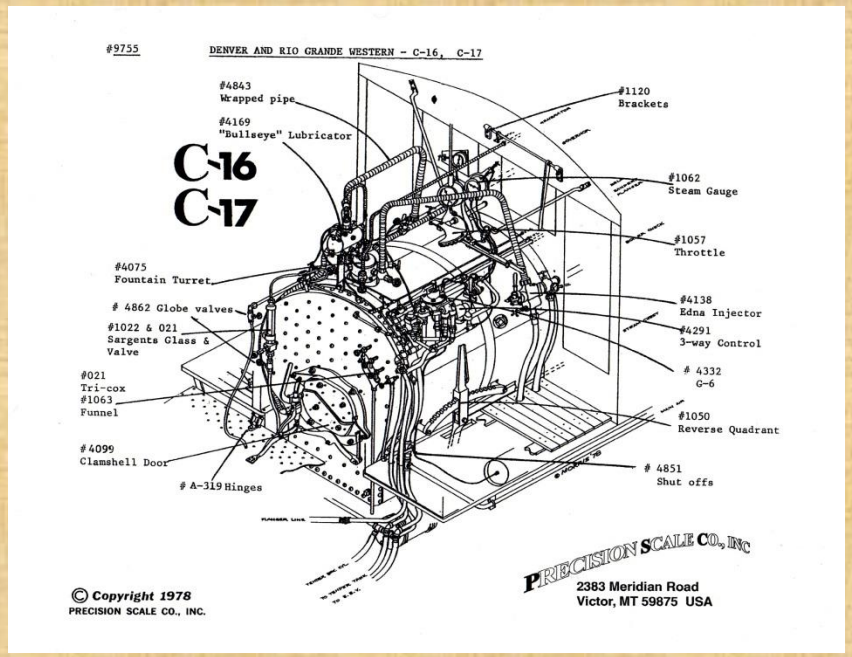
➢ Books and Magazines

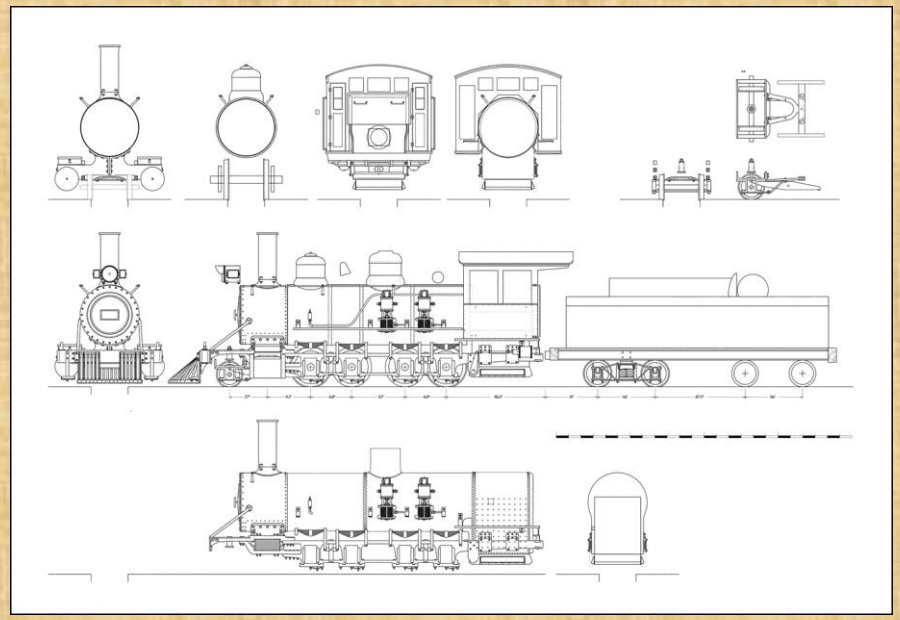


Researching the Prototype

- Collect Photographs
- Take Measurements
- Find Drawings

➢ Internet





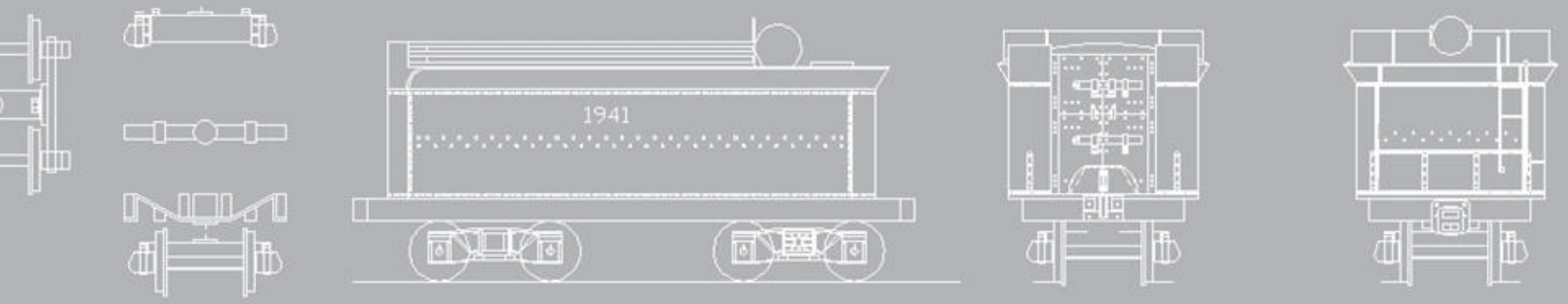
Researching the Prototype

- Collect Photographs
- Take Measurements
- Find Drawings

➢ Museums

Drafting Plans

- Scaling up/down
- Drawing by hand/copy machine
- Computer Aided Design



Let the building begin!

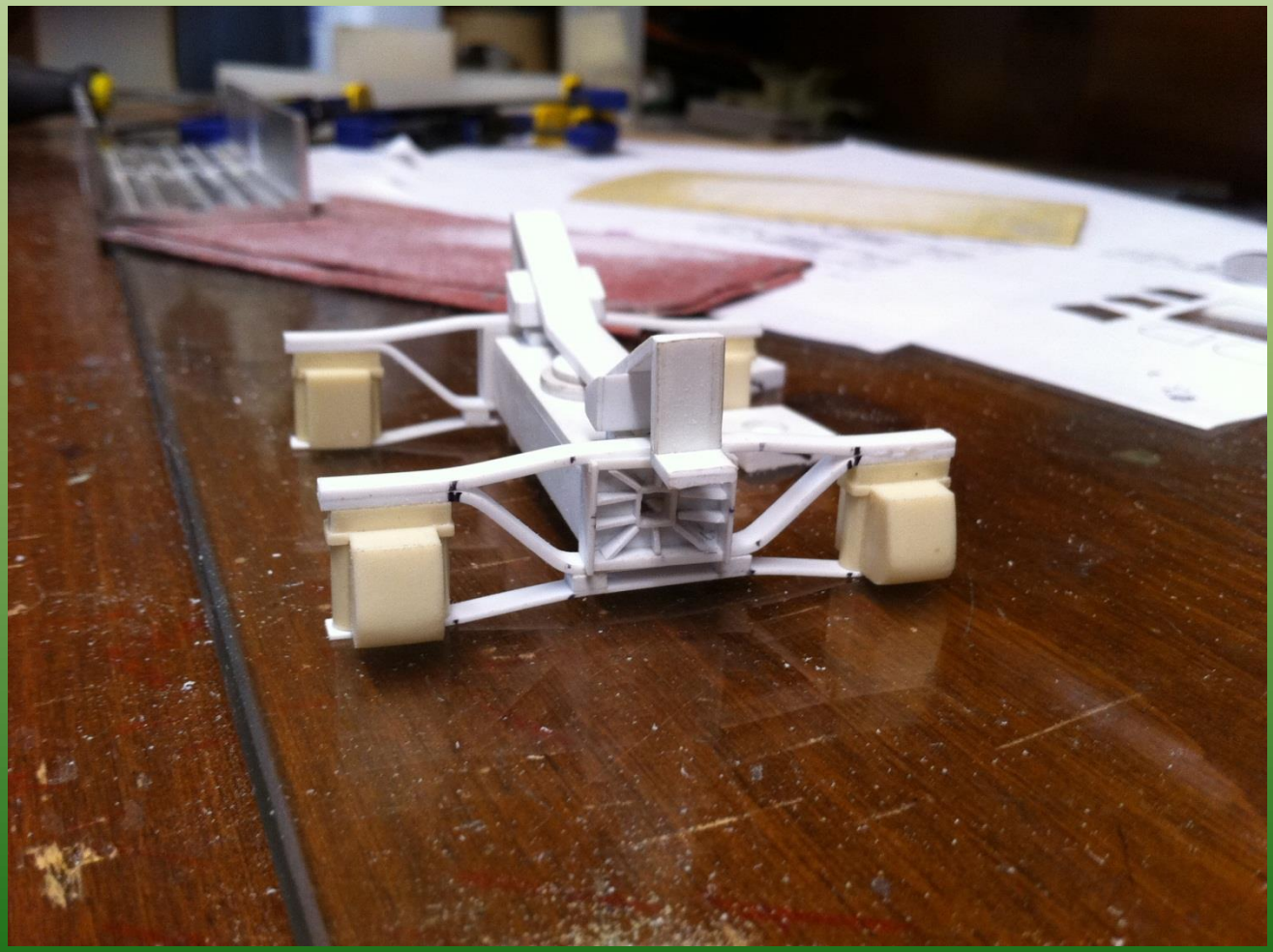
Construction

Let’s start with the tender.

Construction

Tender

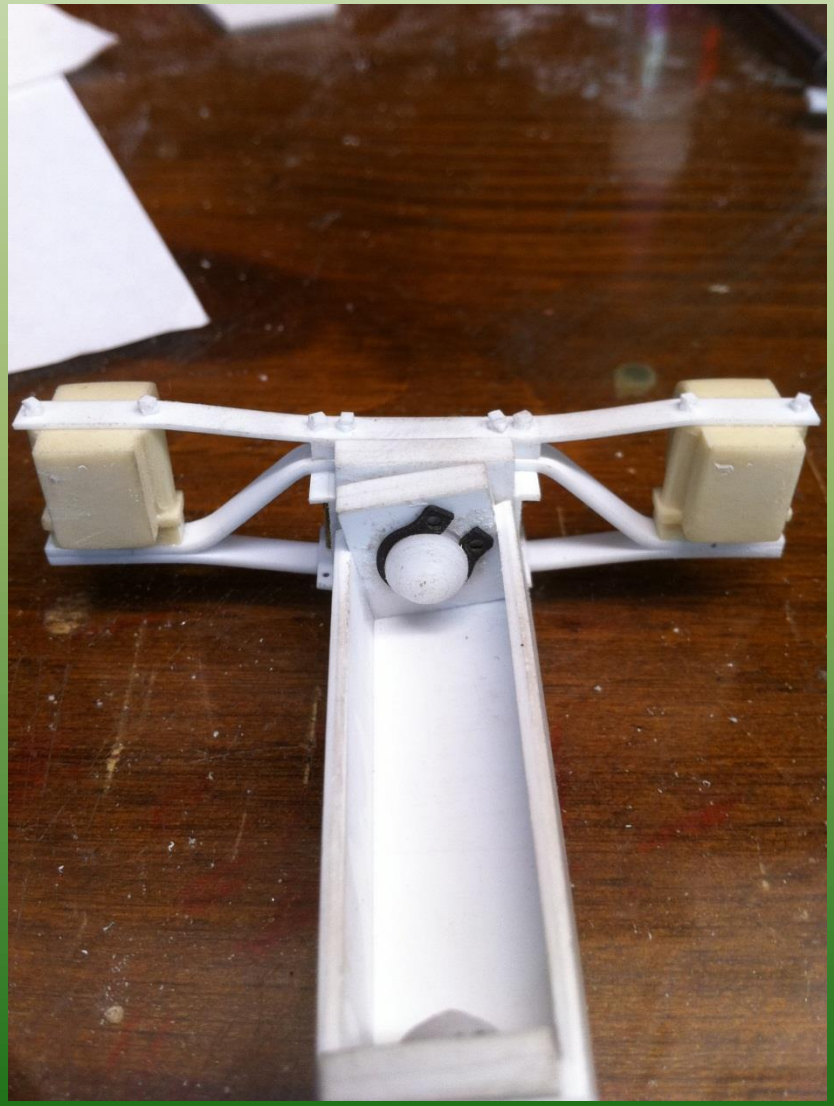
- Trucks



Construction

Tender

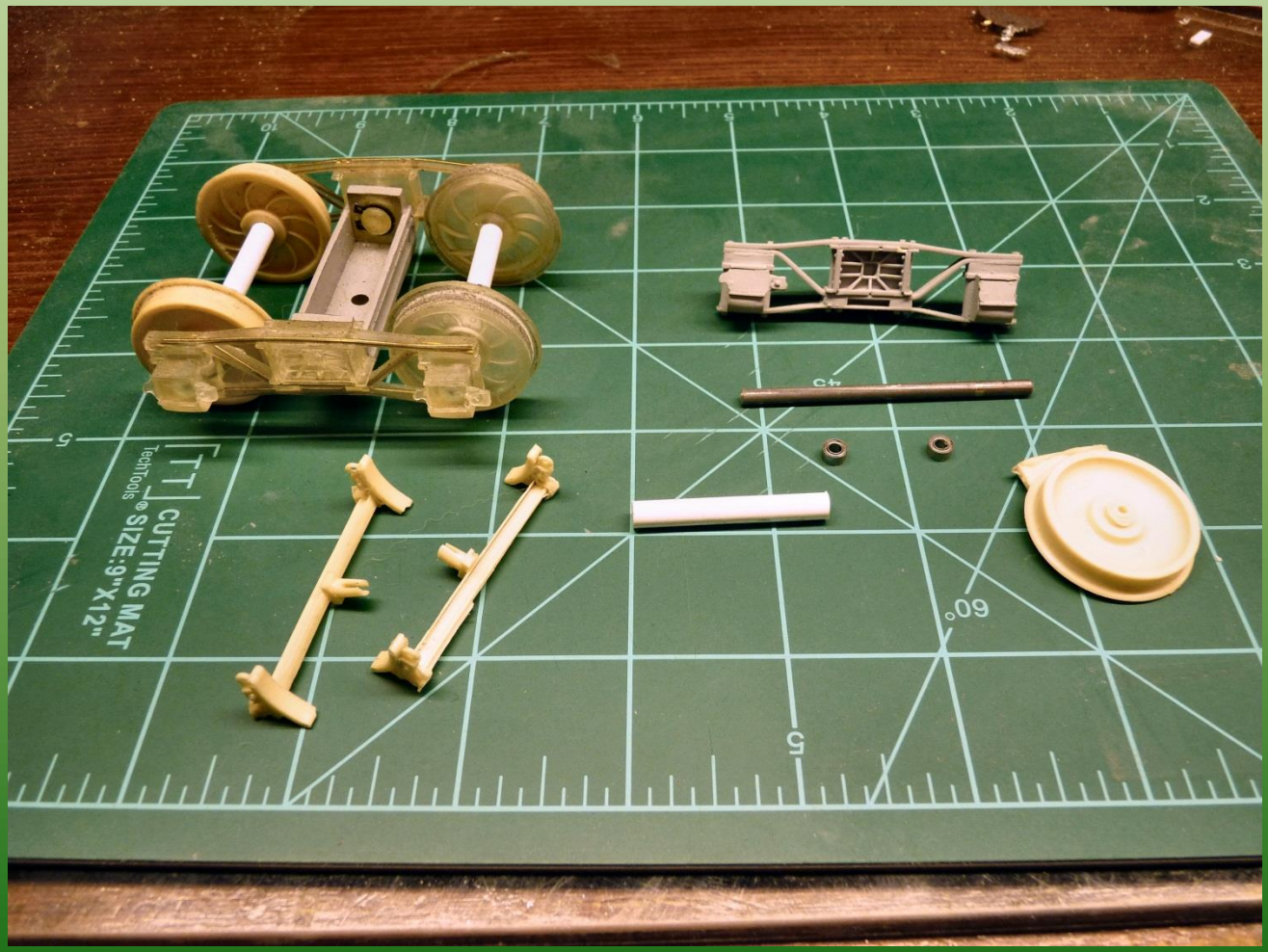
- Trucks



Construction

Tender

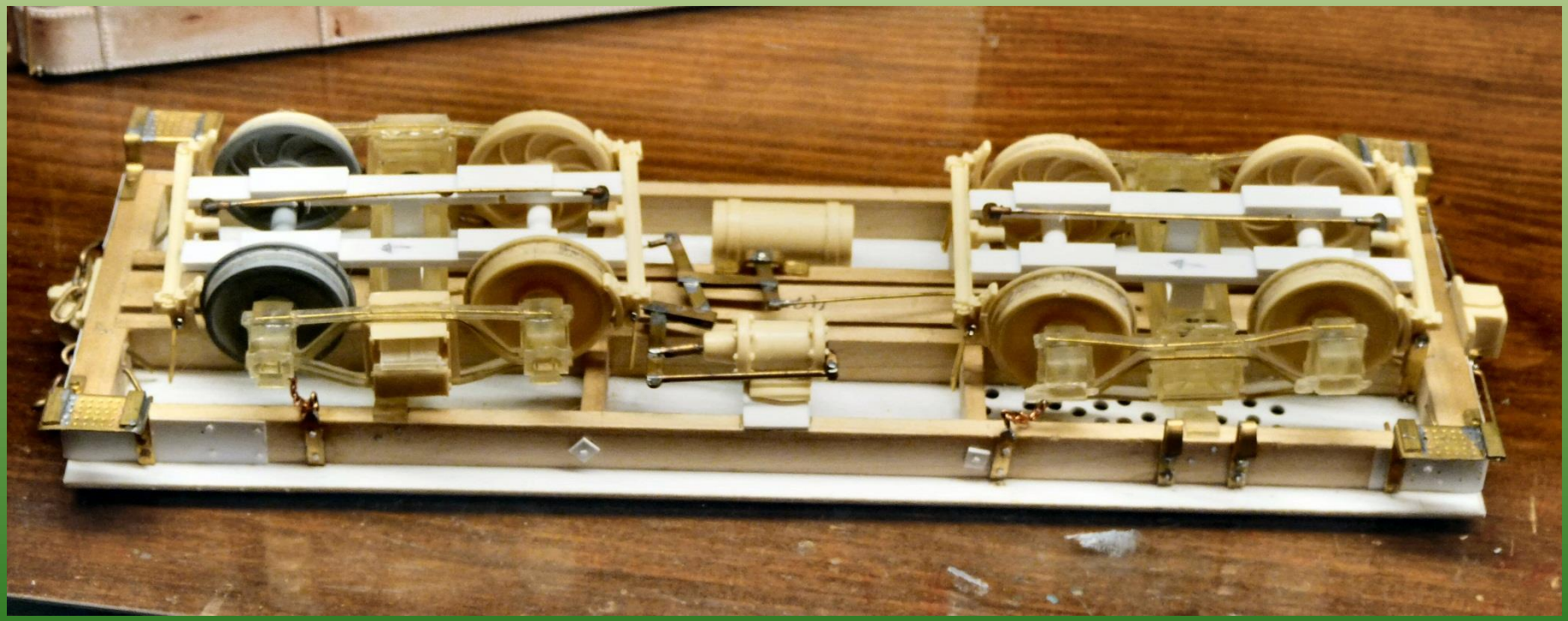
- Trucks



Construction

Tender

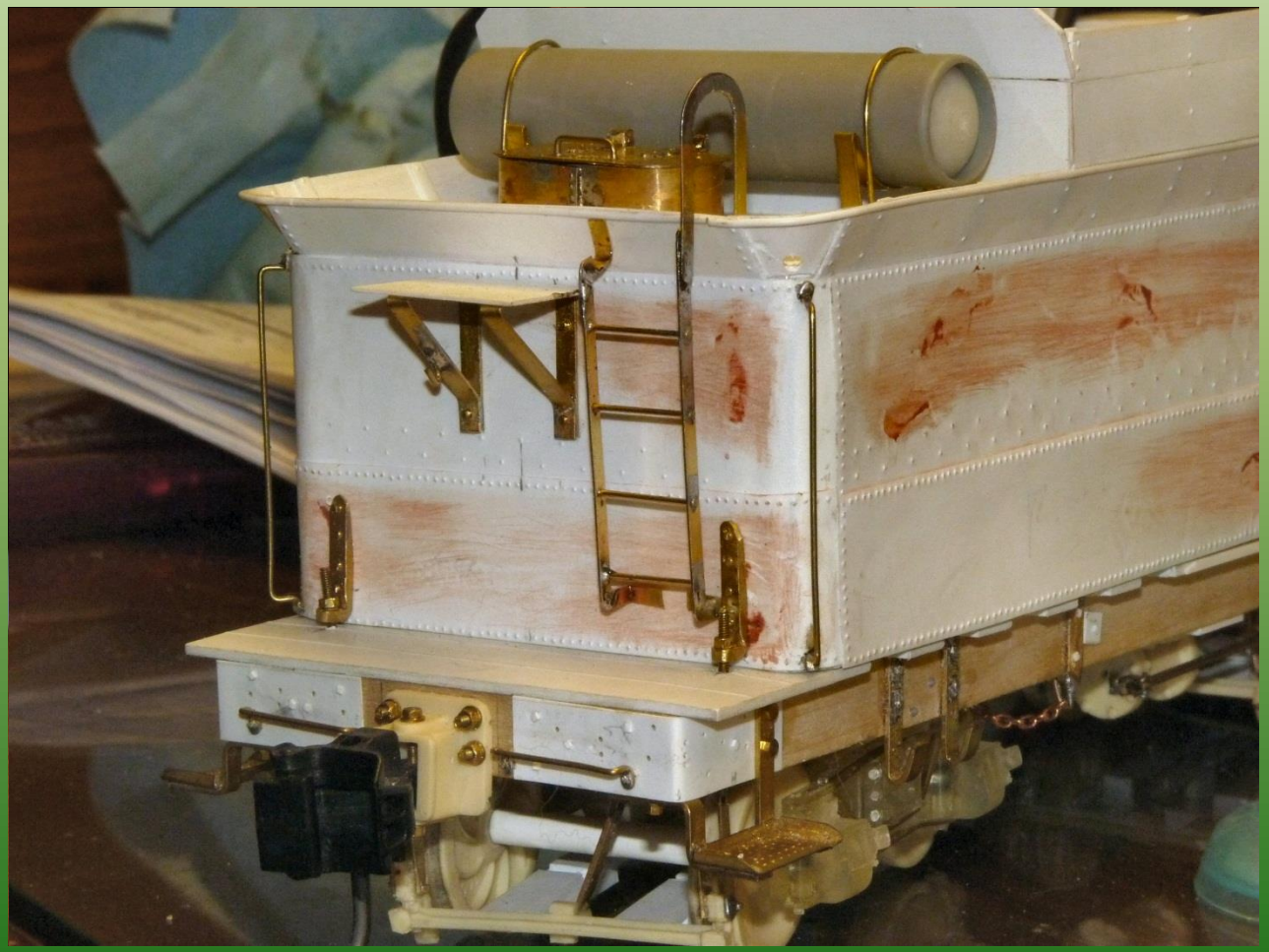
- Frame



Construction

Tender

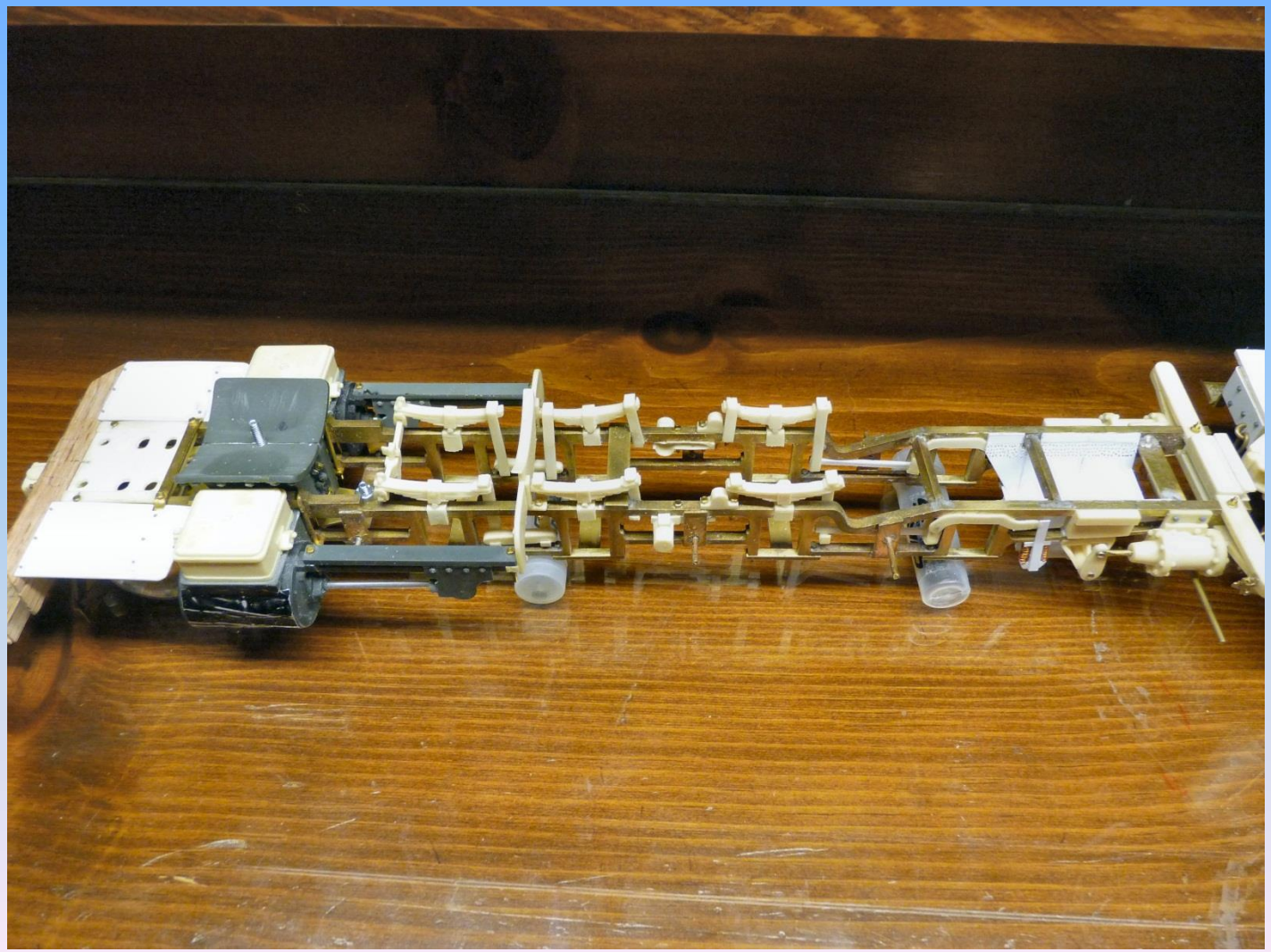
- Tank



Now…
On to the locomotive!

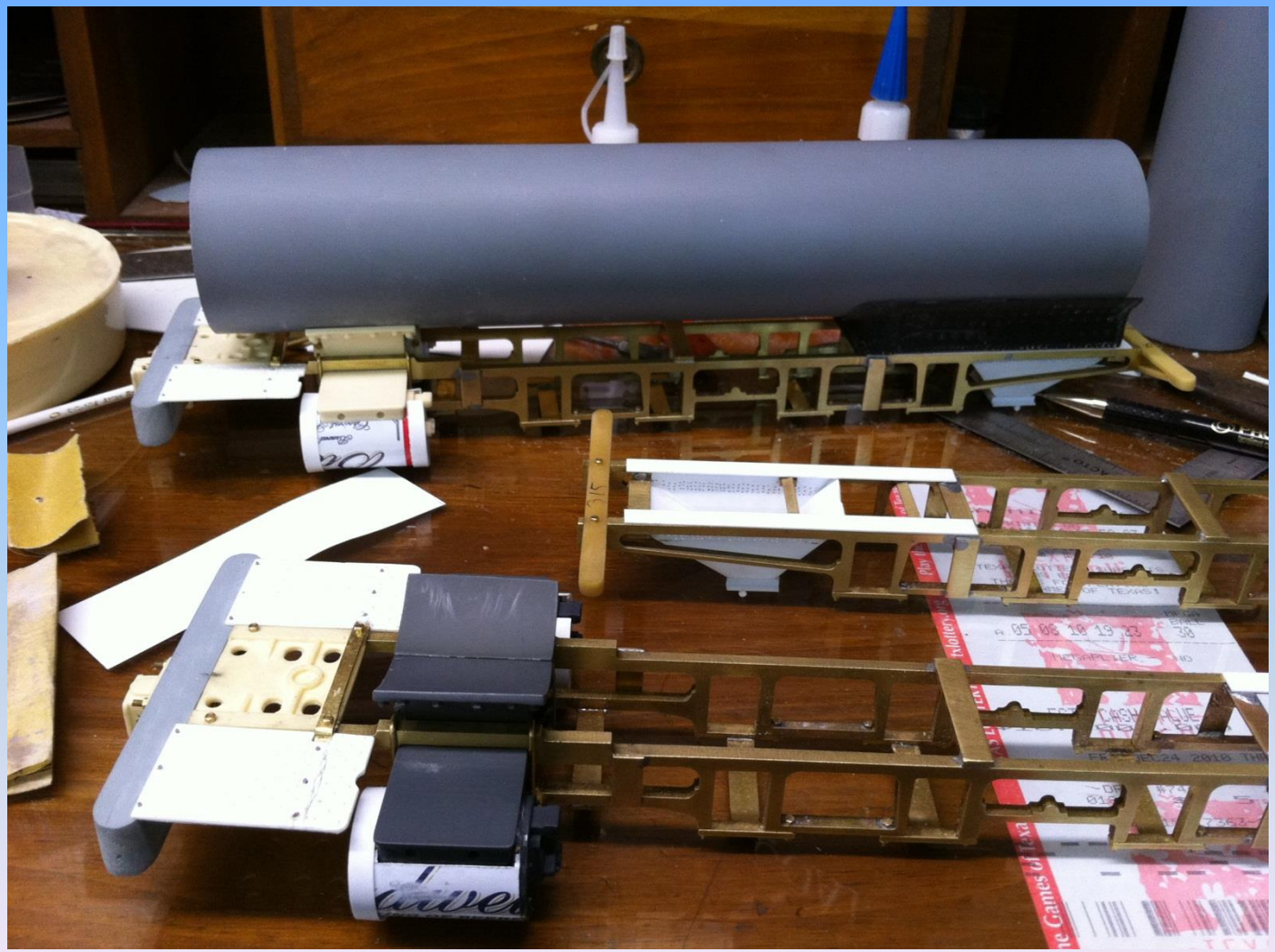
Construction

The Frame



Construction
The Locomotive

The Frame



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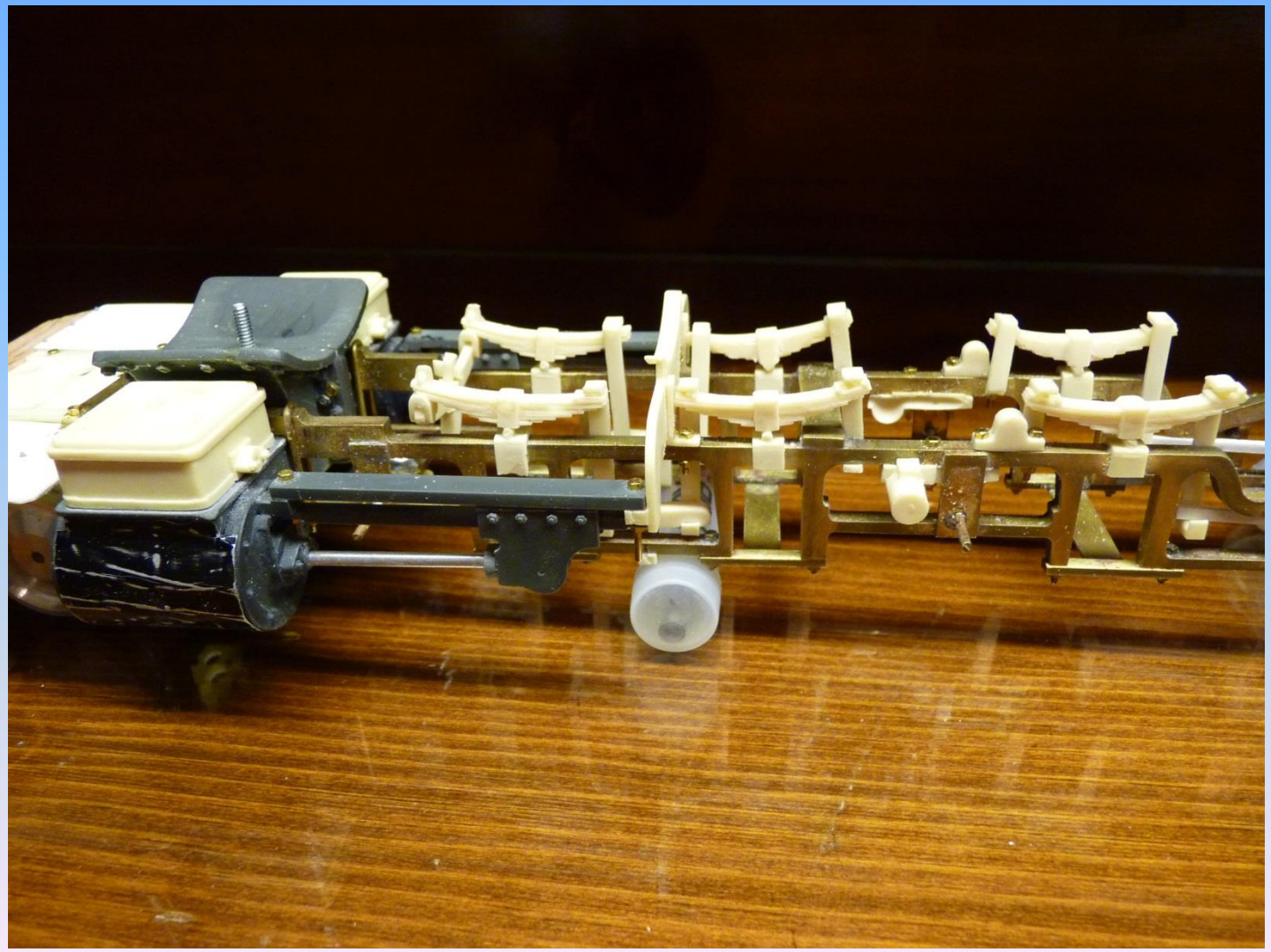

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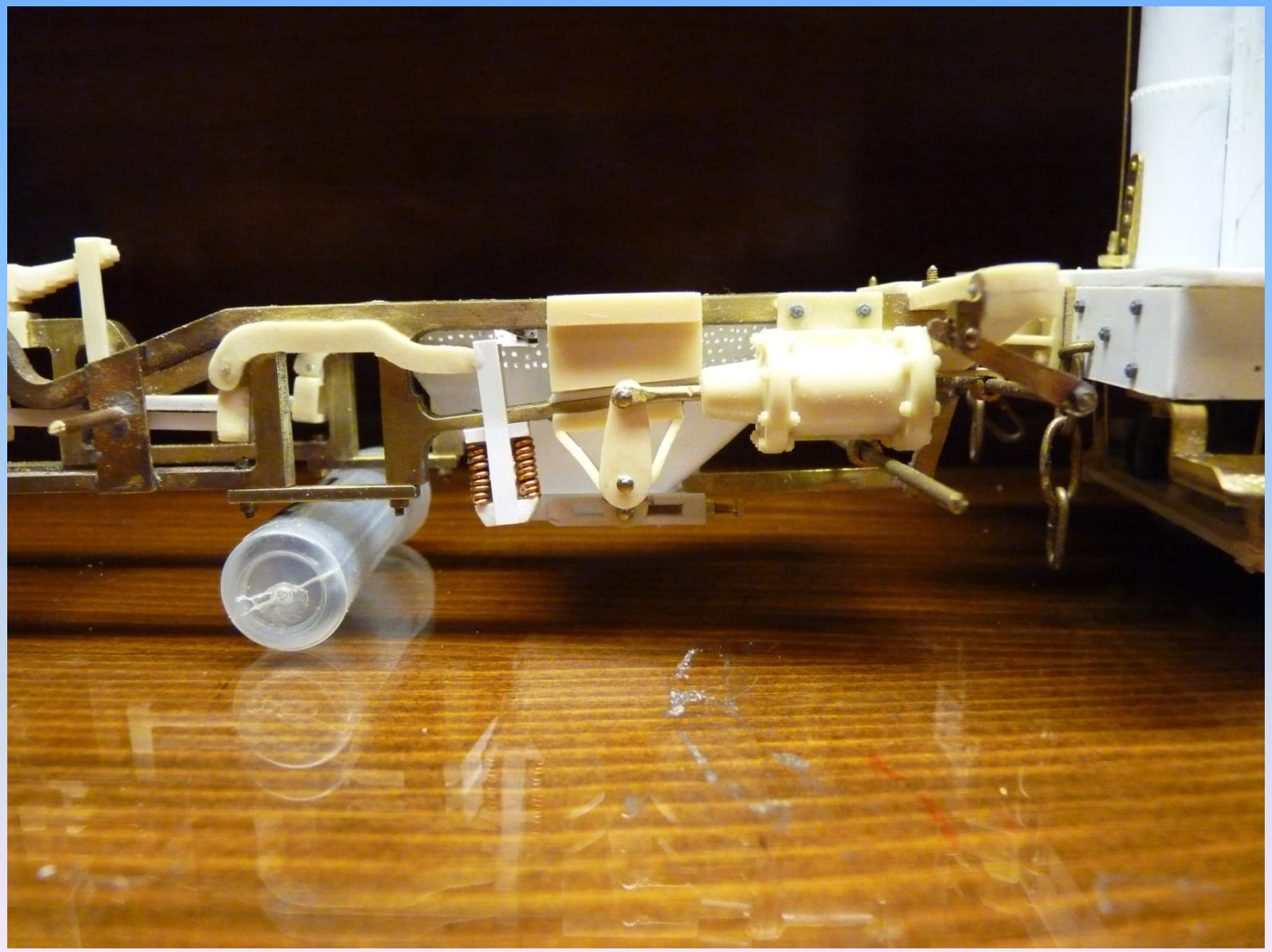

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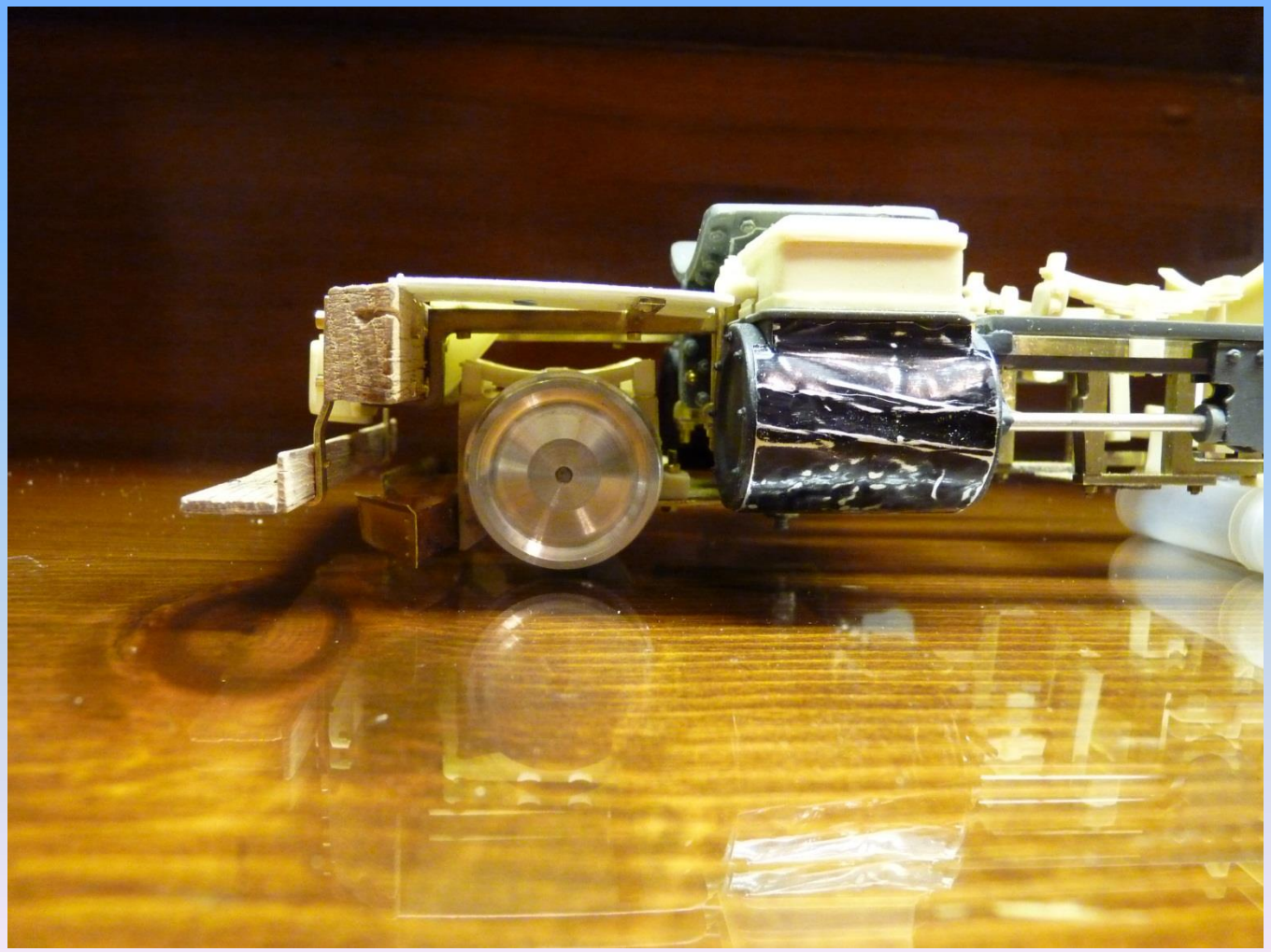
The Locomotive

The Frame



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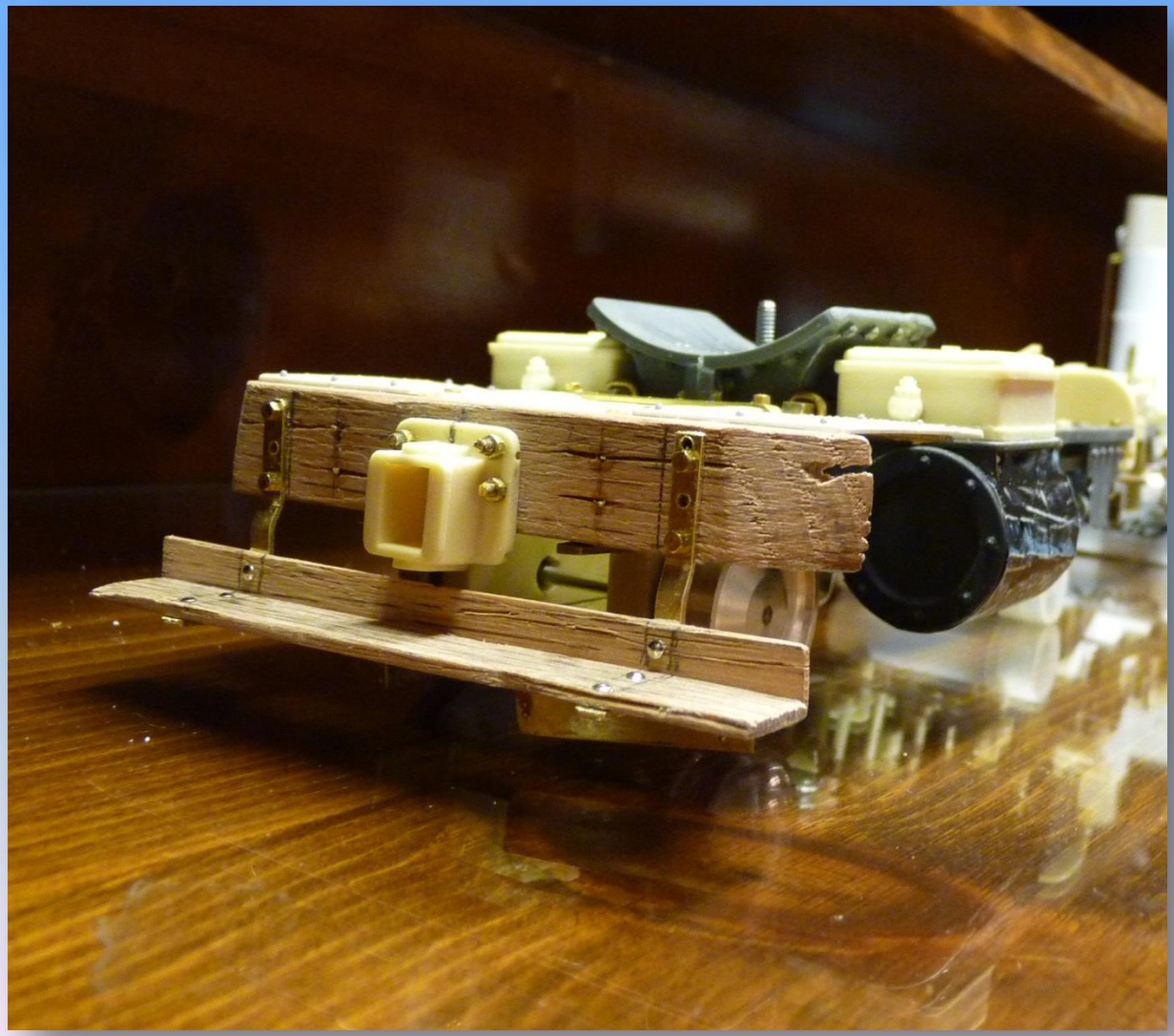
The Locomotive

The Frame



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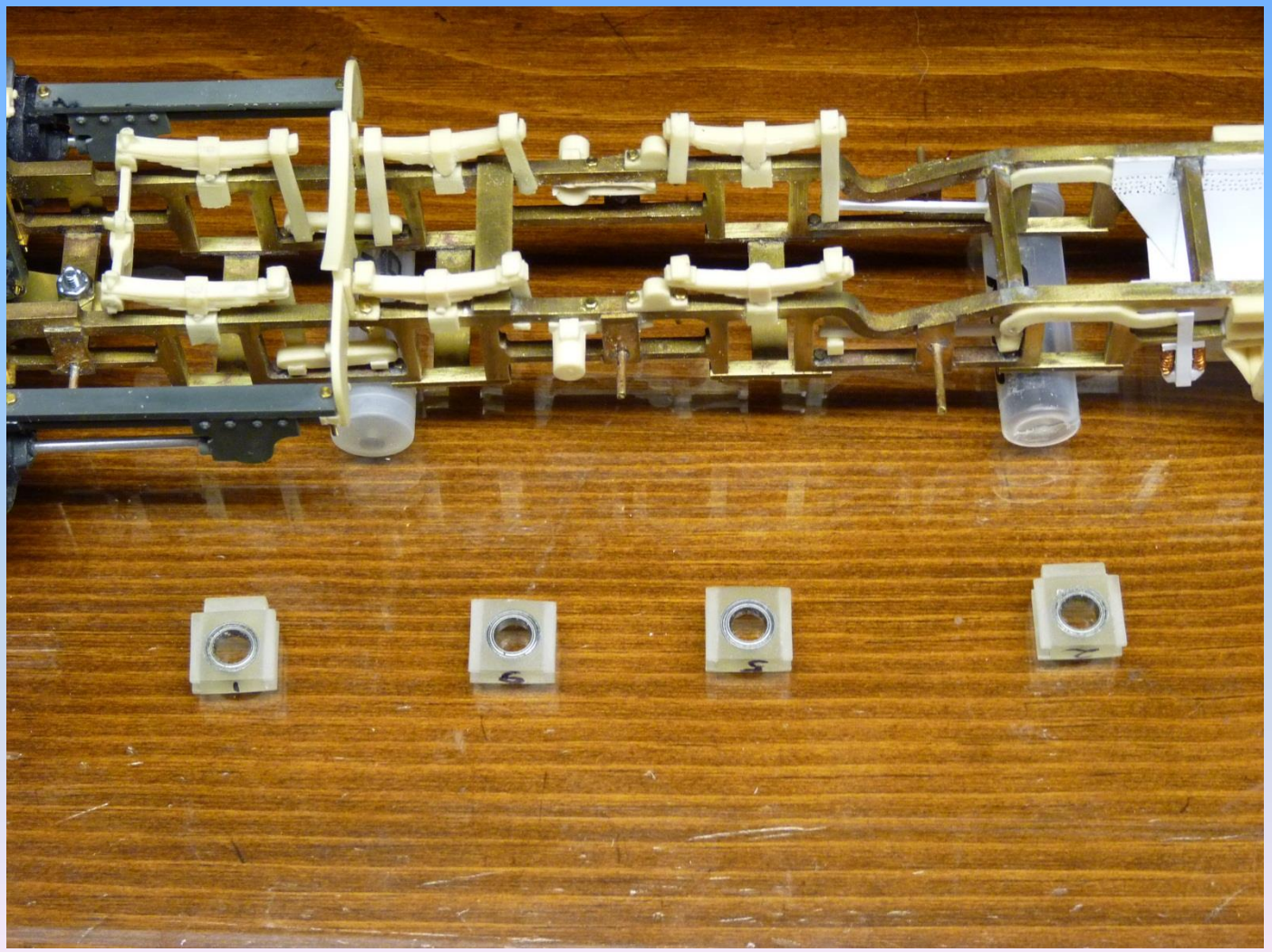

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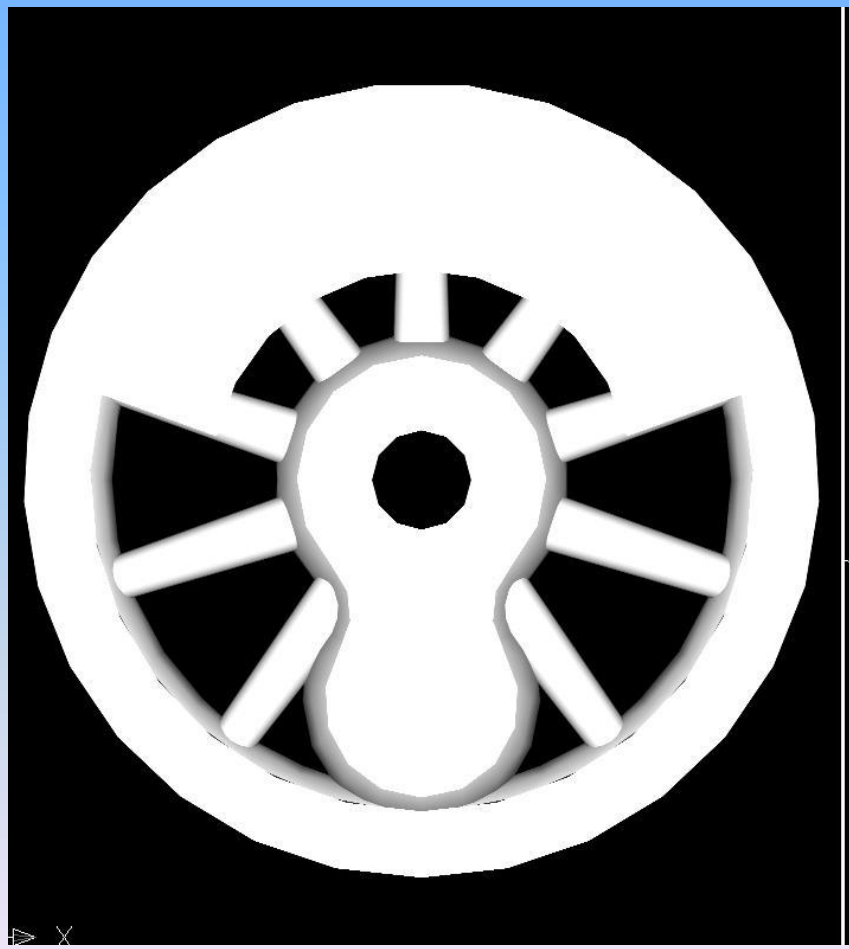

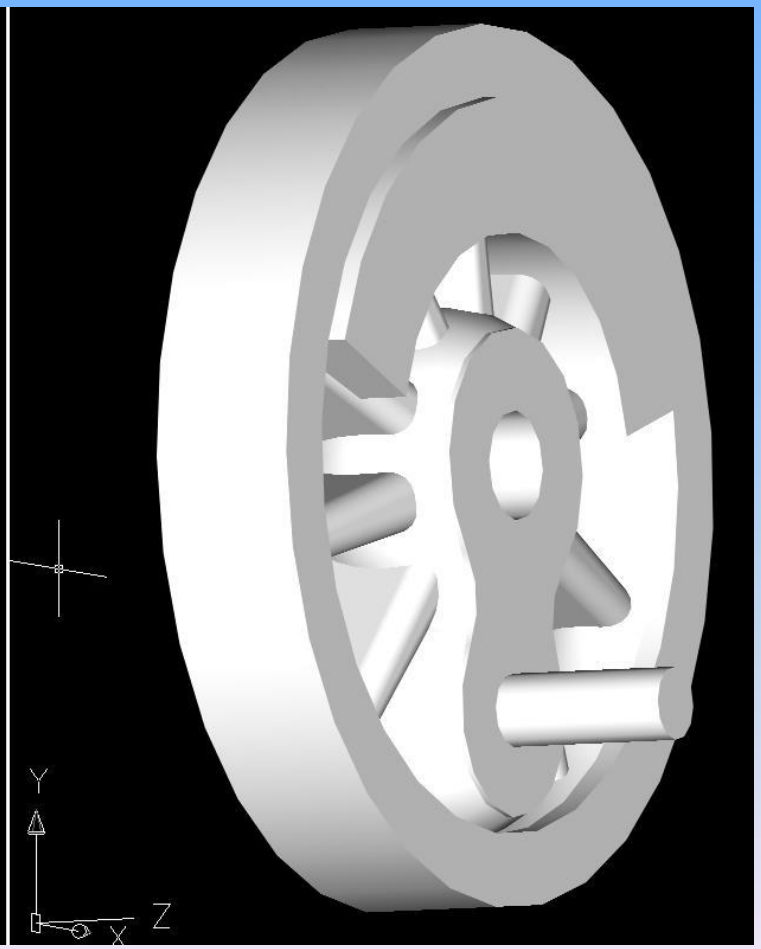

Construction
The Locomotive

The Frame

Construction

The Locomotive

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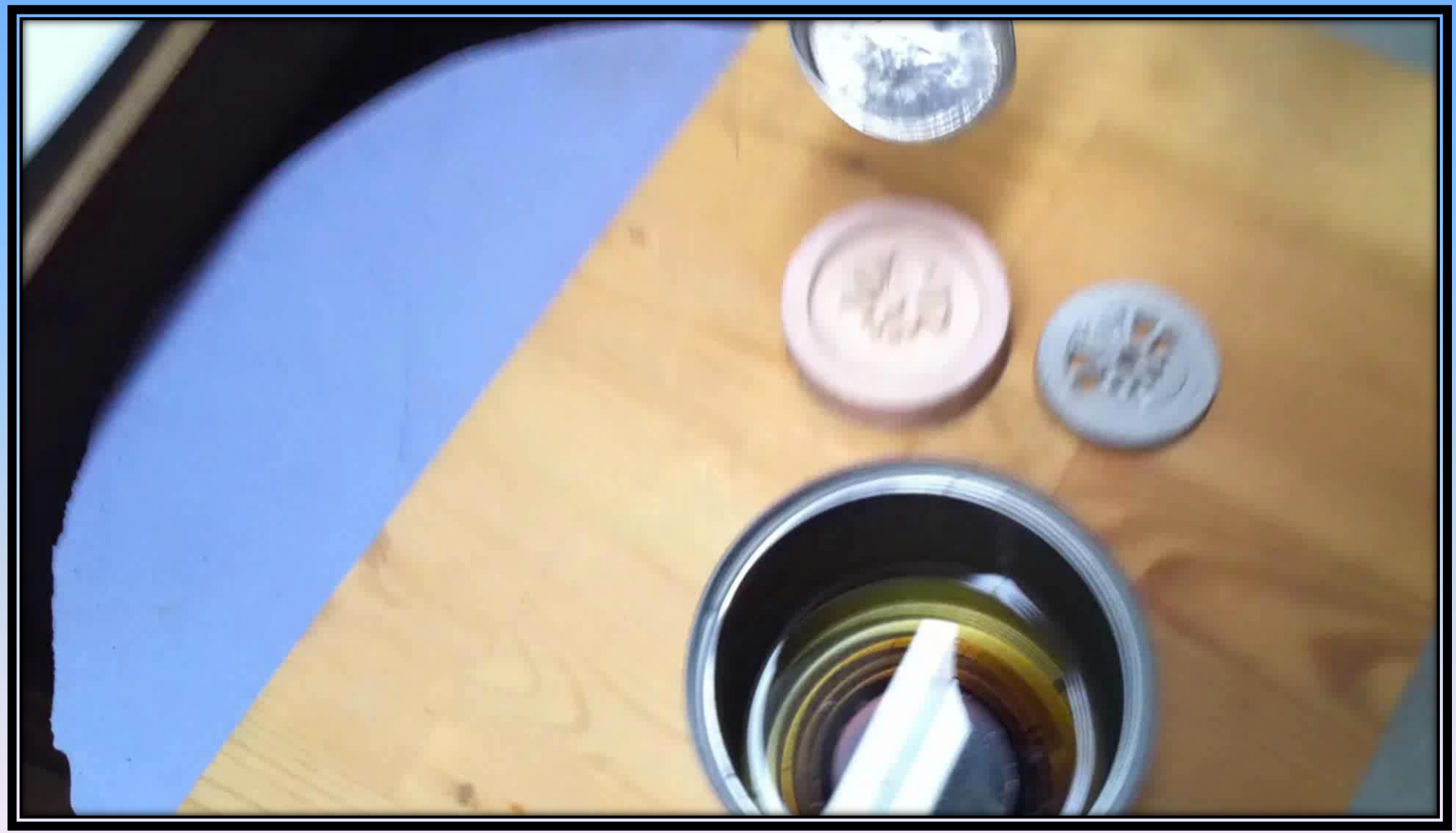

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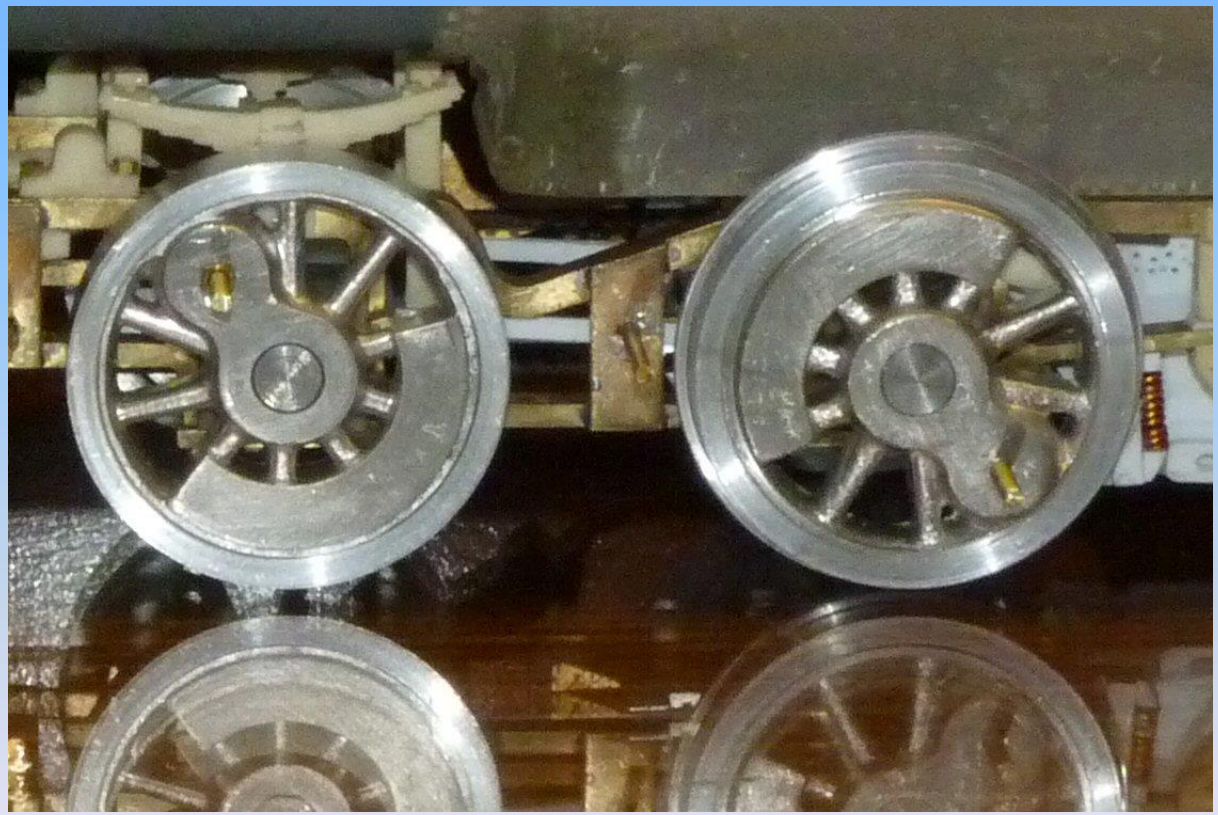

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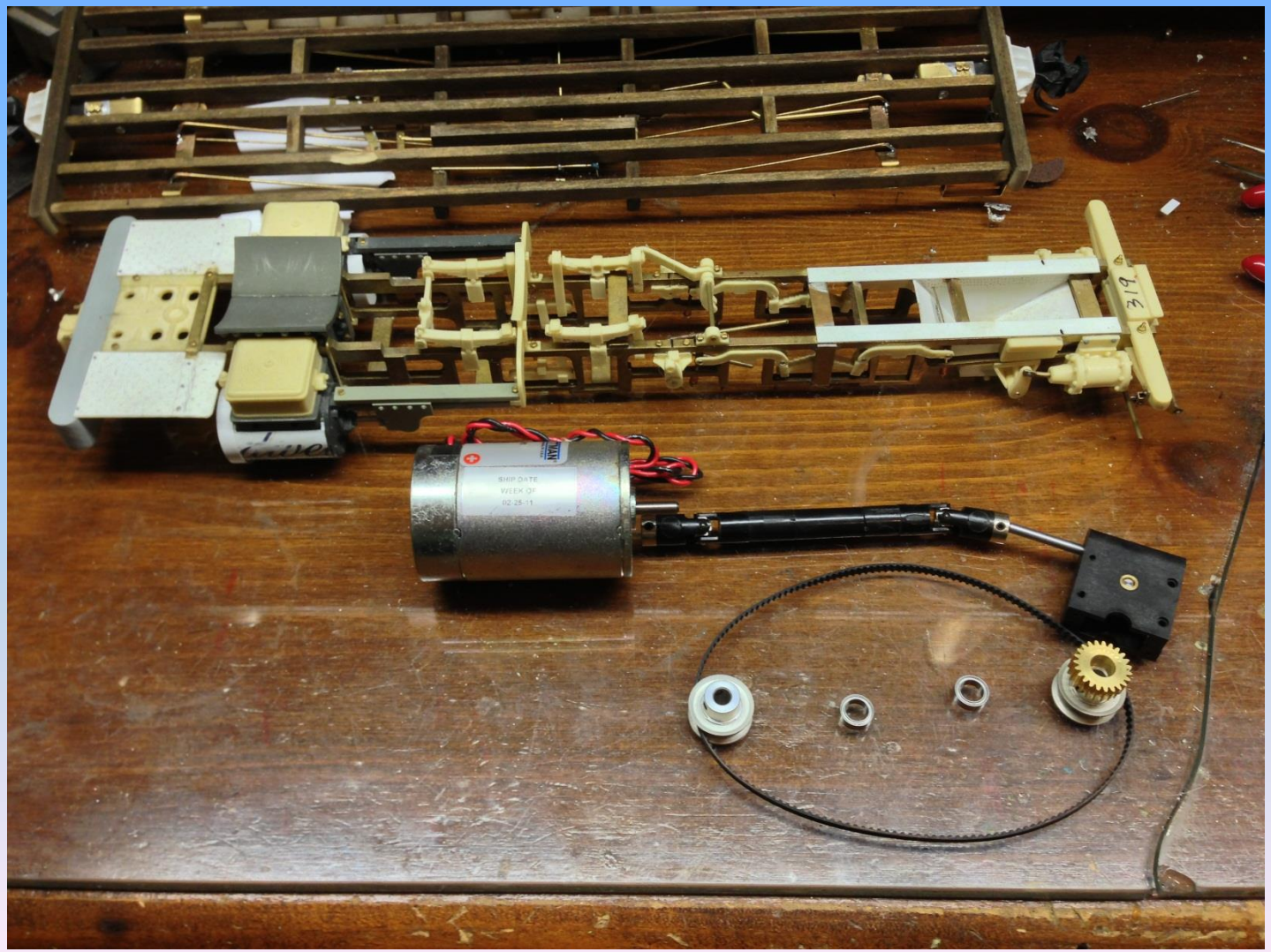

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The Locomotive

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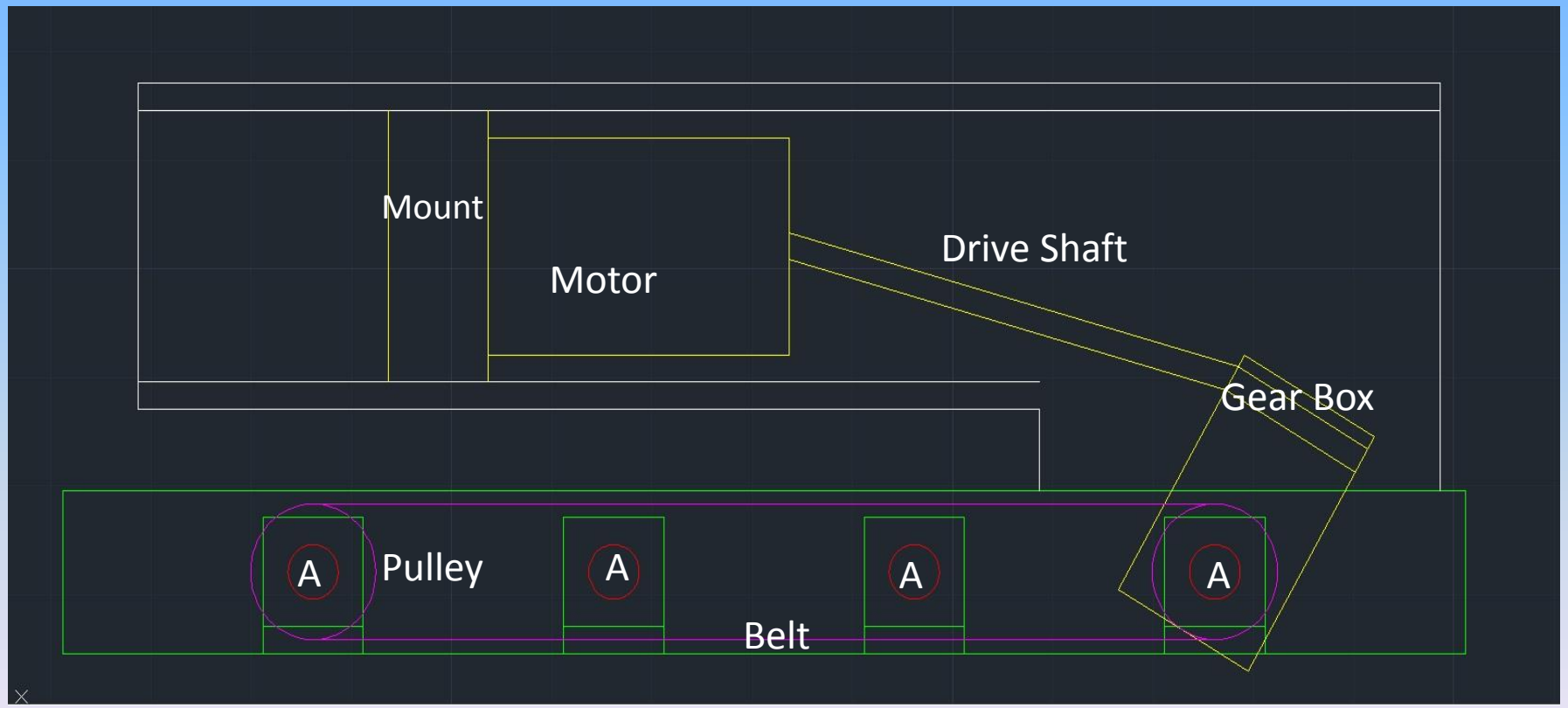

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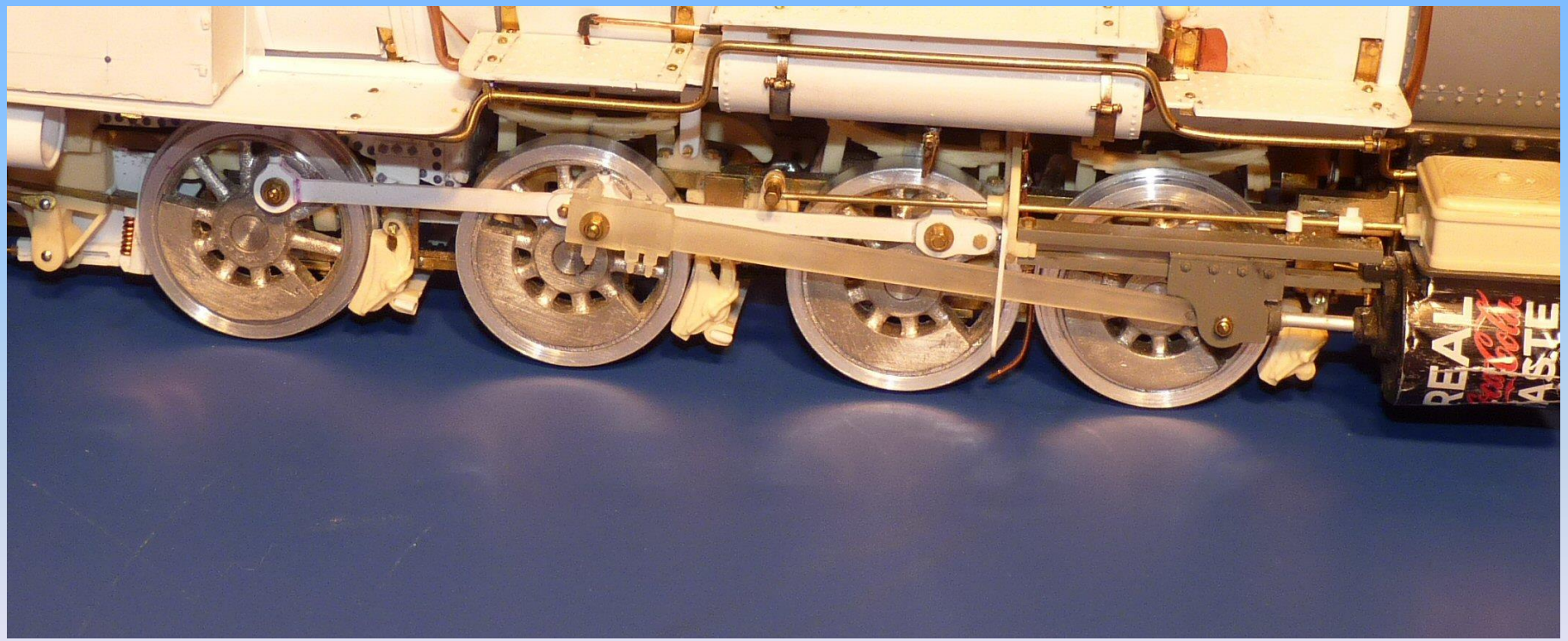

Construction

The Locomotive

Construction
The Locomotive

The Boiler

Construction
The Locomotive

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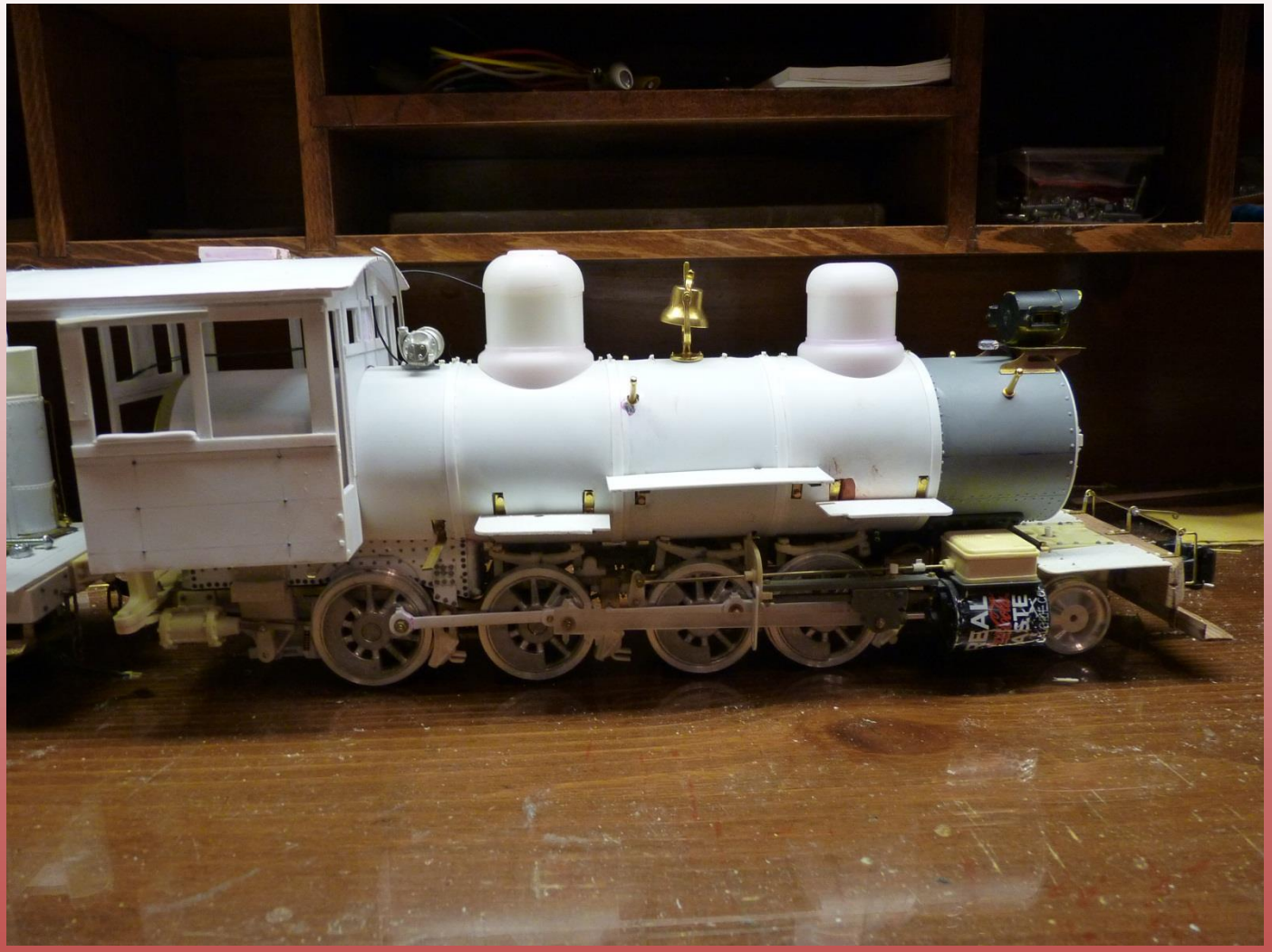
The Locomotive

The Boiler



Construction
The Locomotive

The Boiler

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The Locomotive

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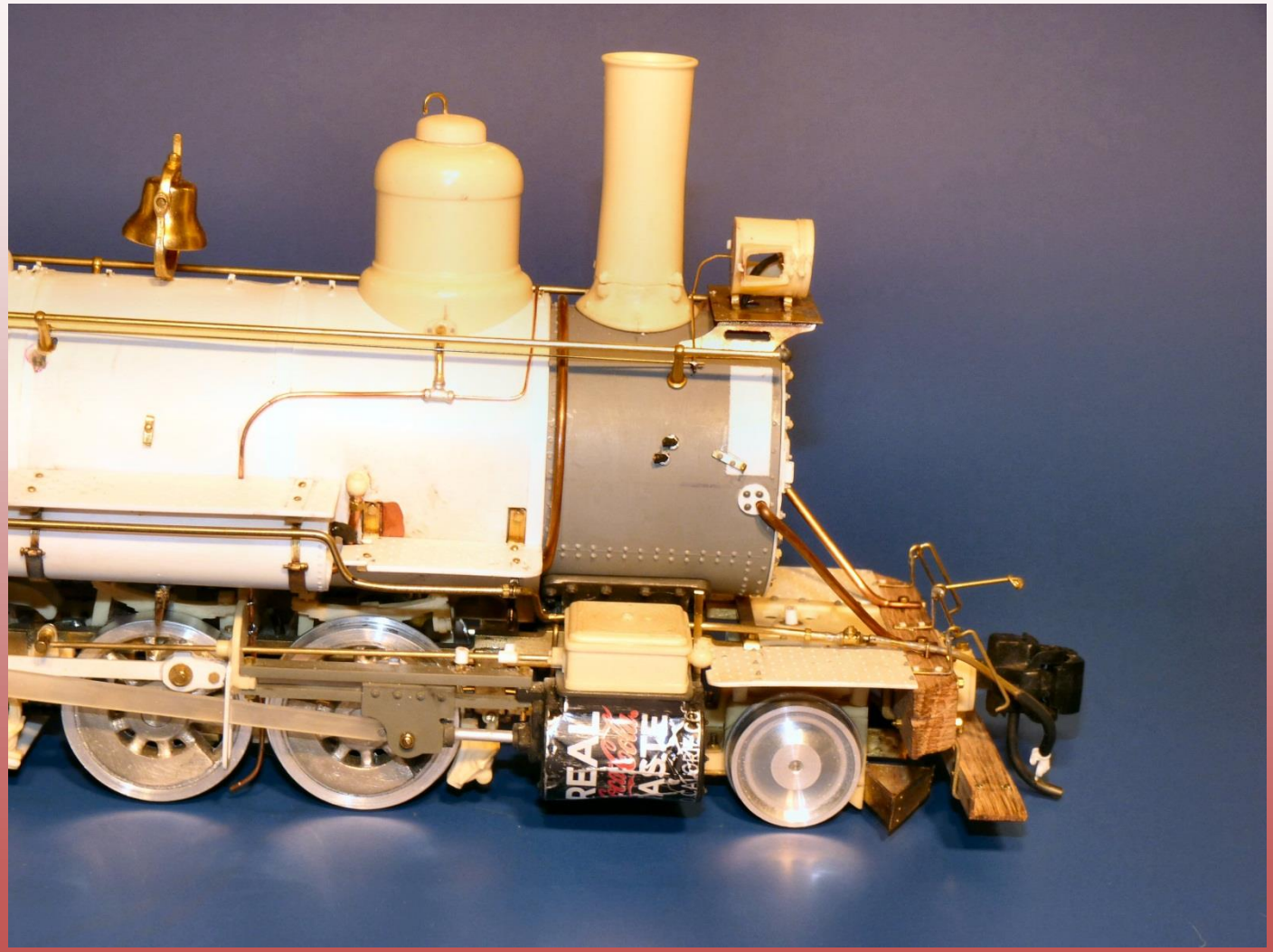
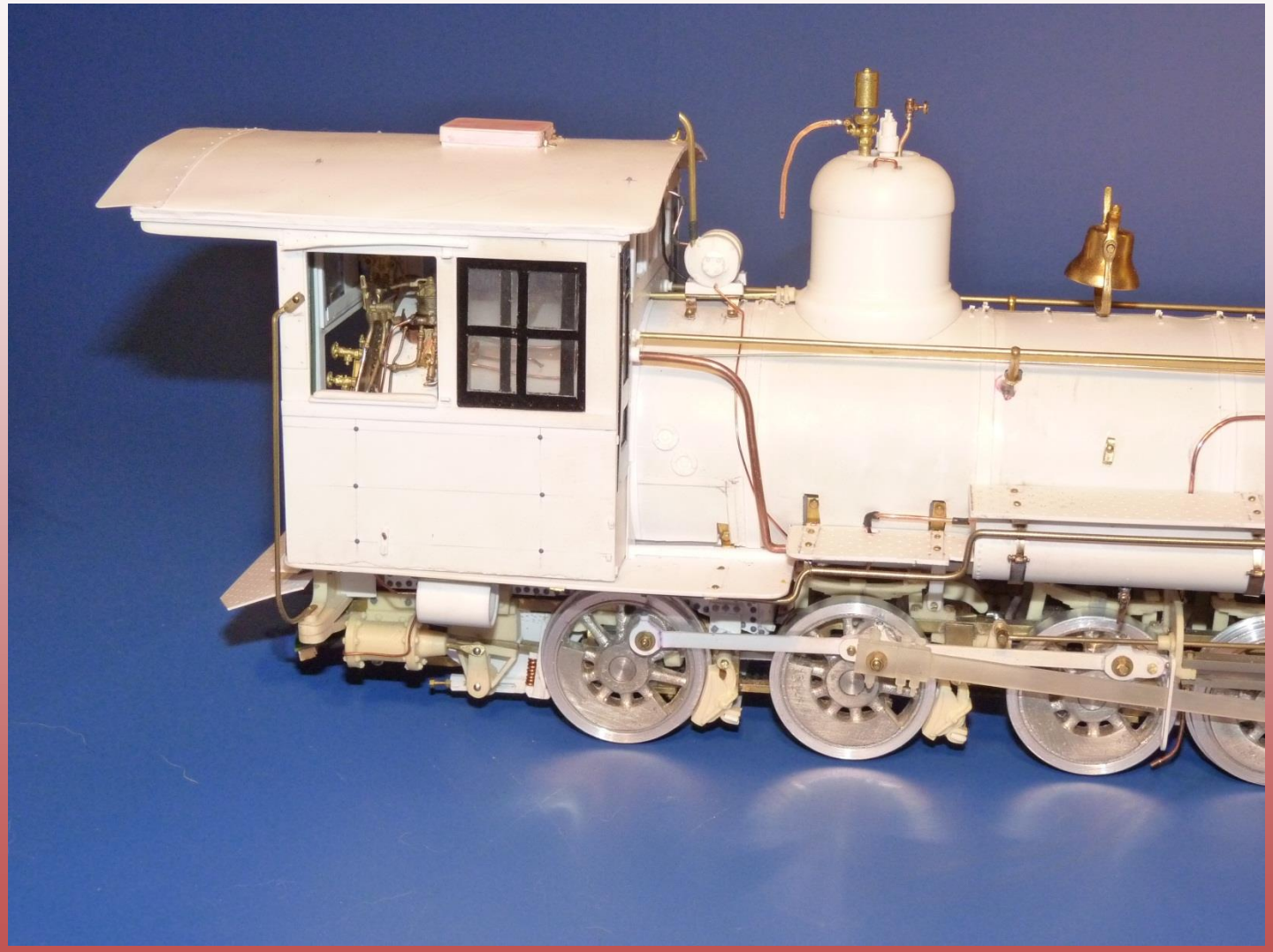


Construction
The Locomotive

The Boiler



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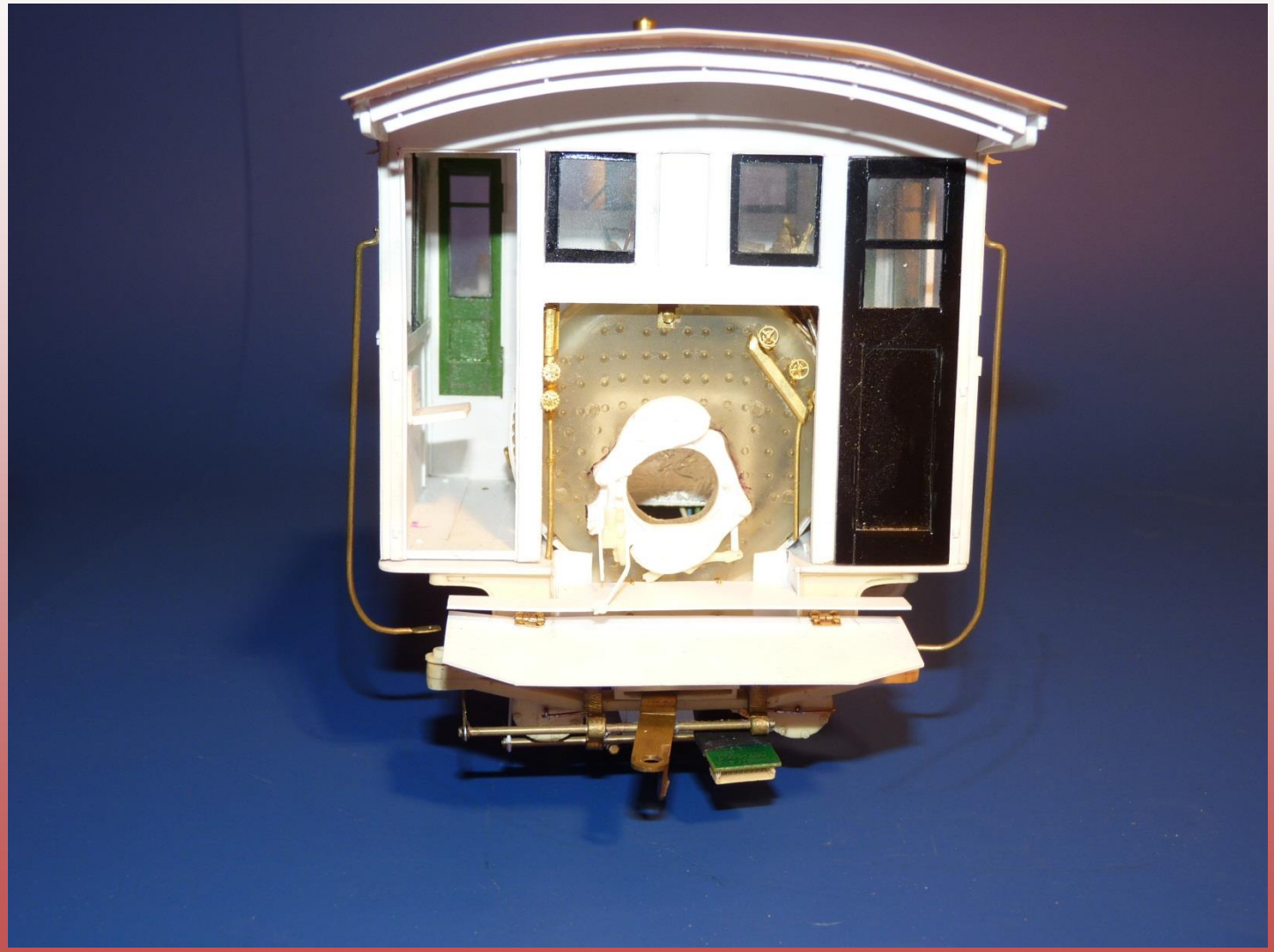
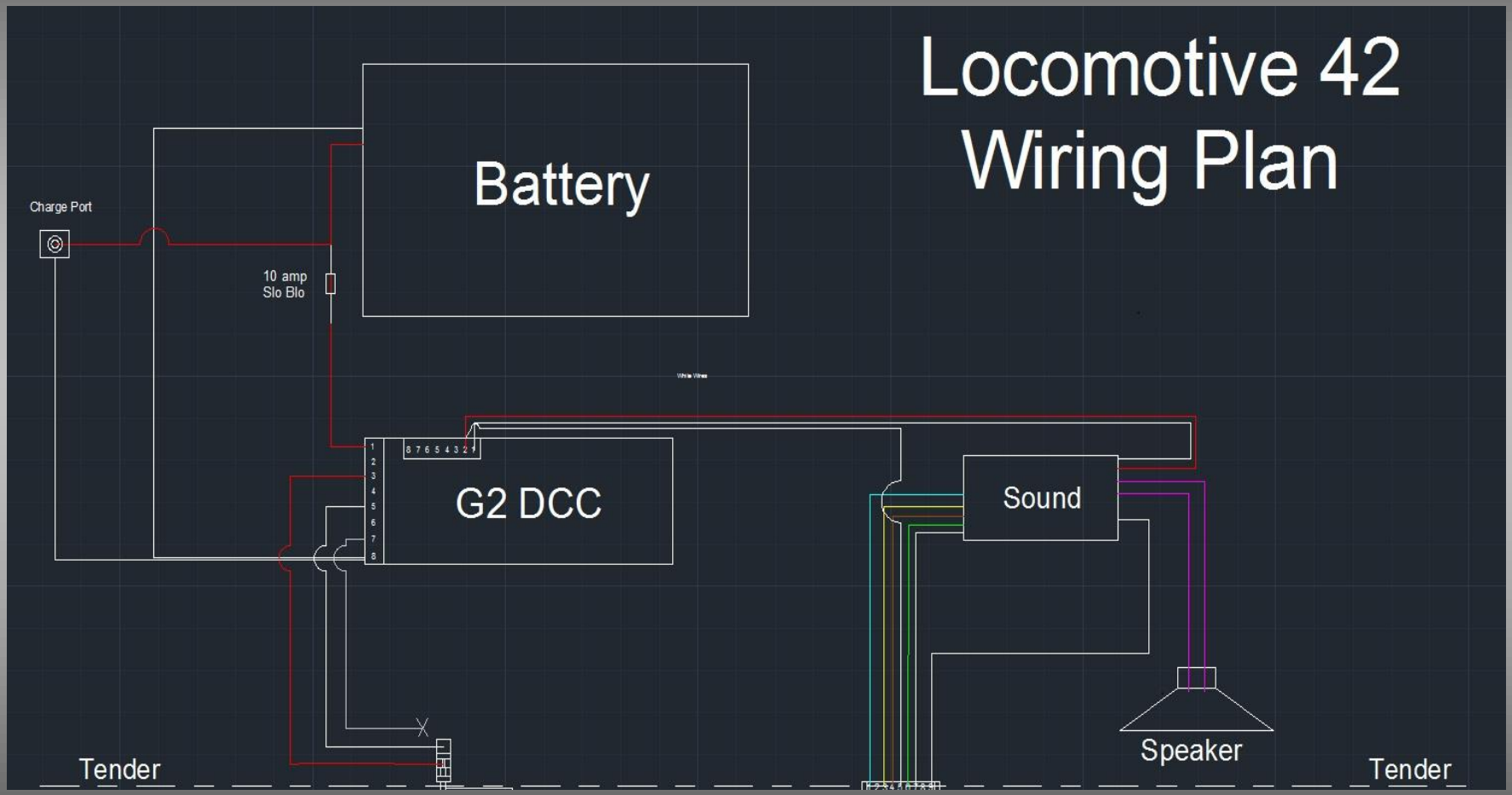


Construction

Electronics



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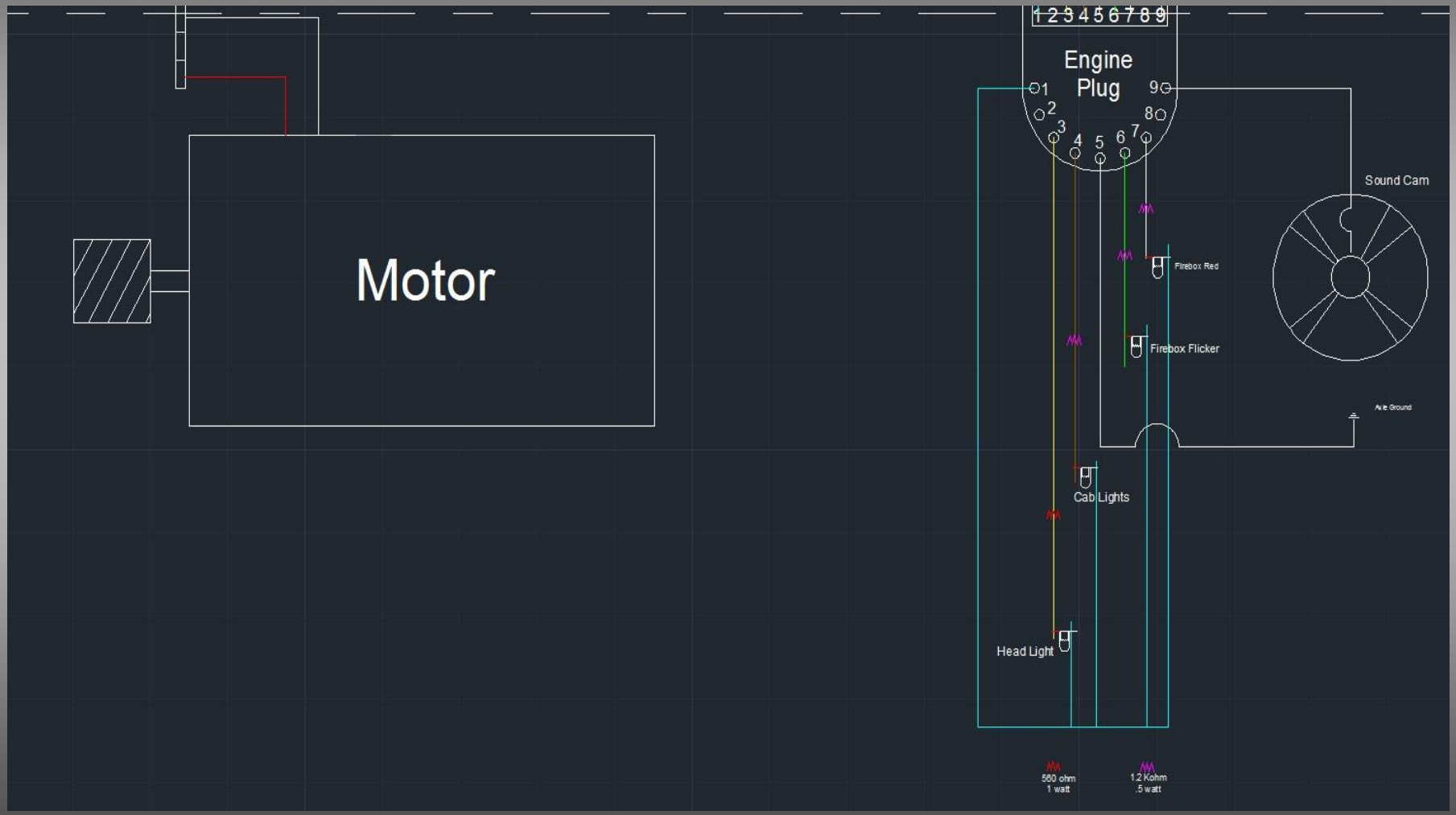

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Electronics

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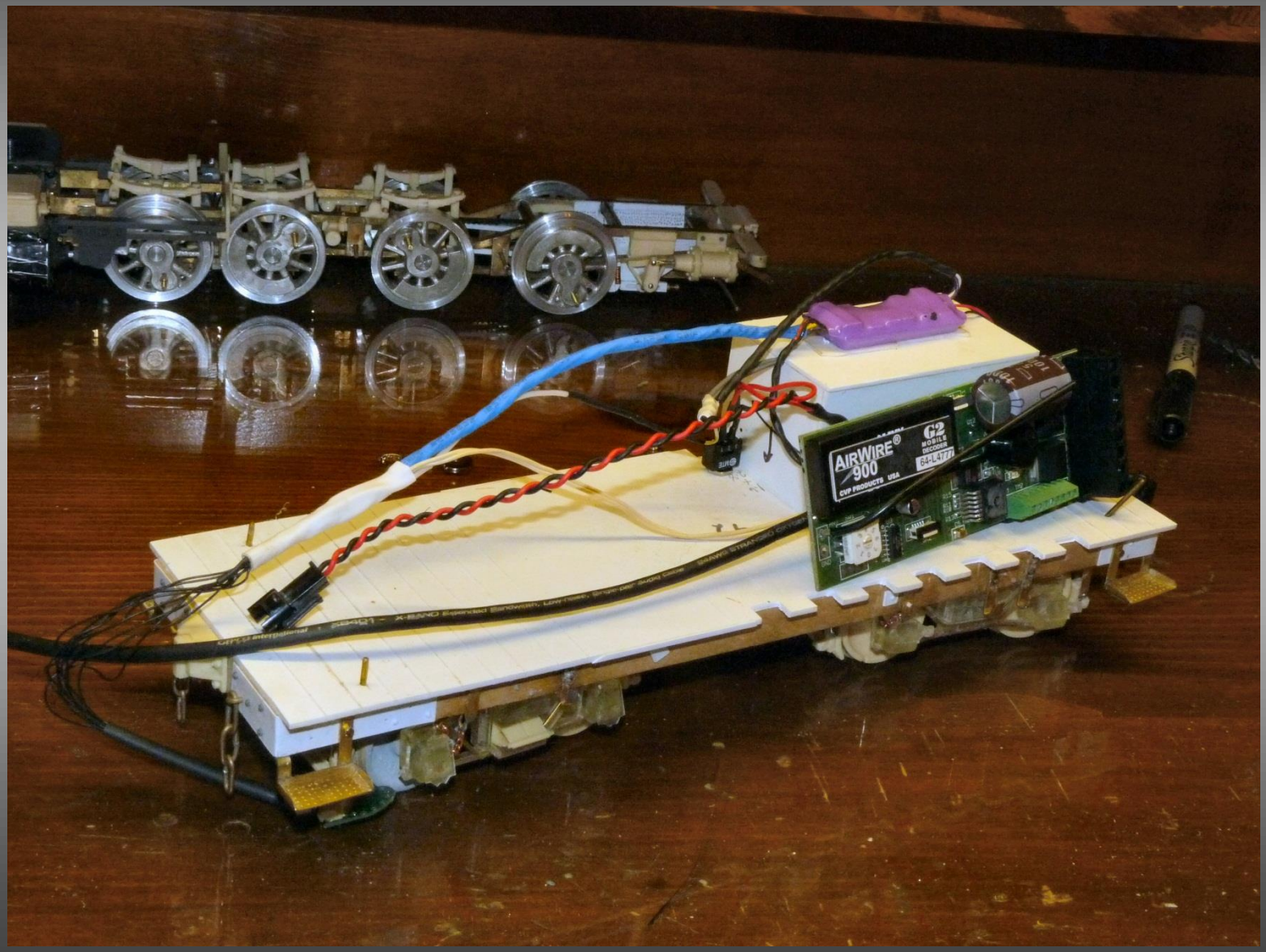

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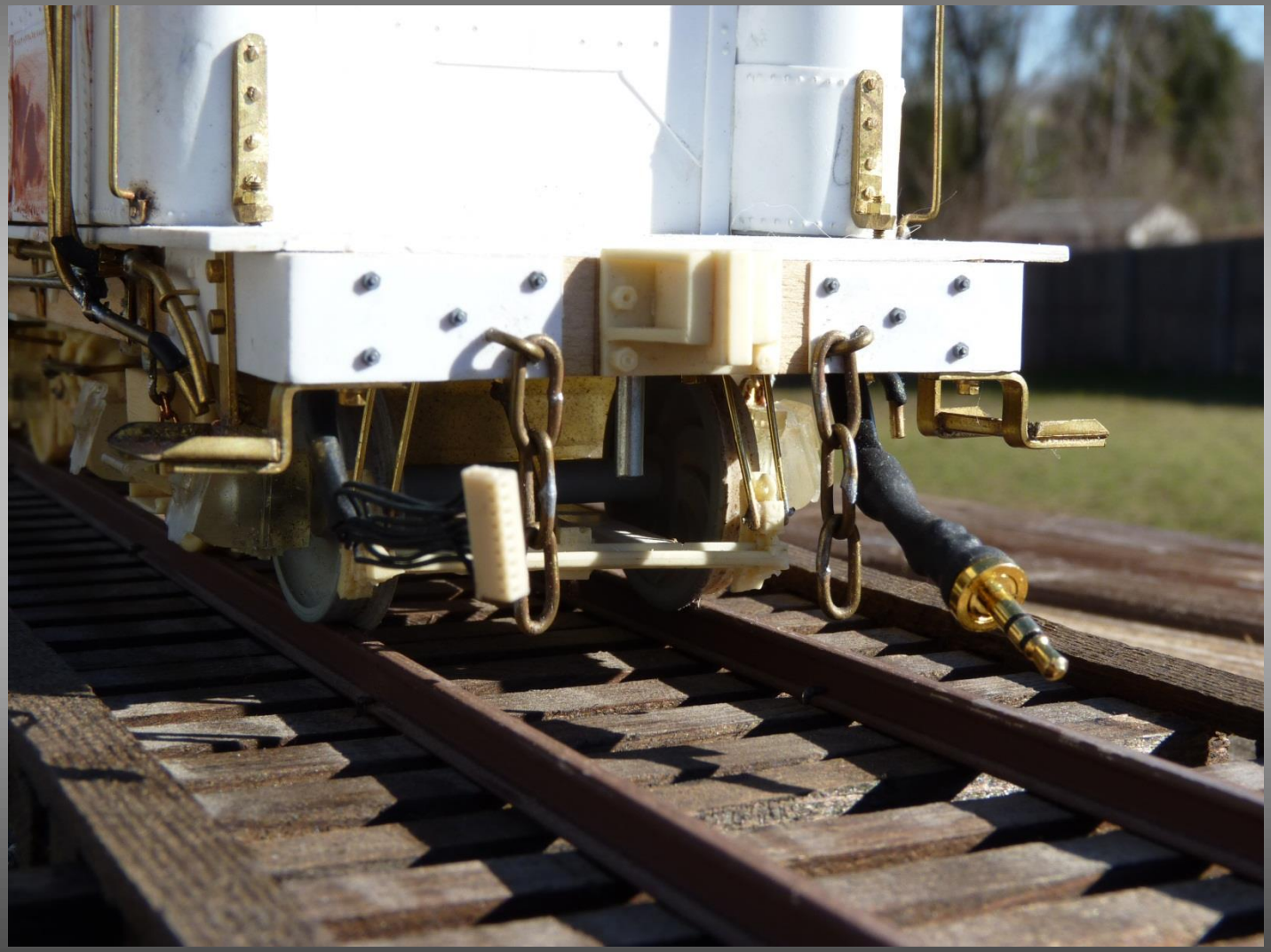
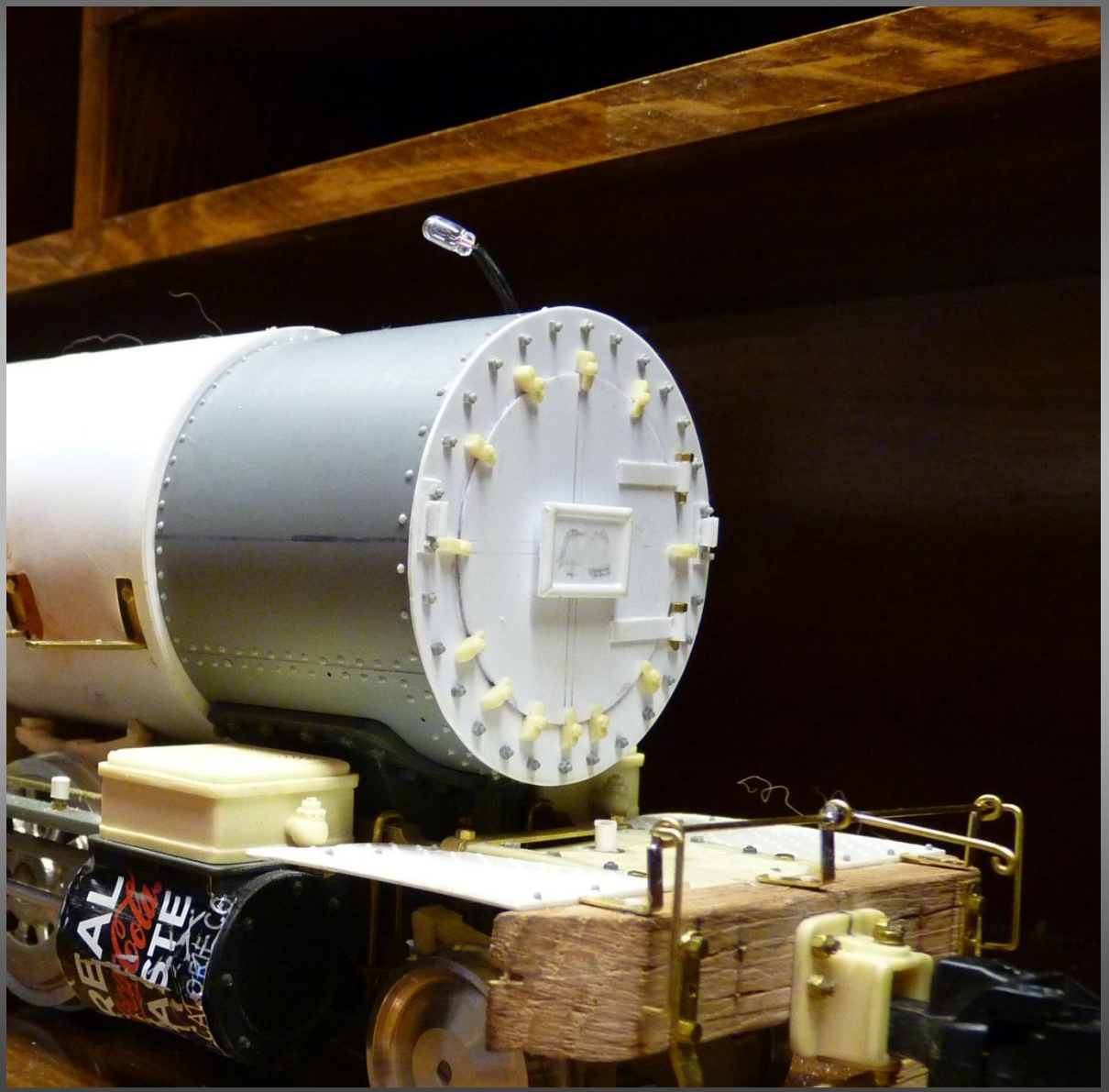
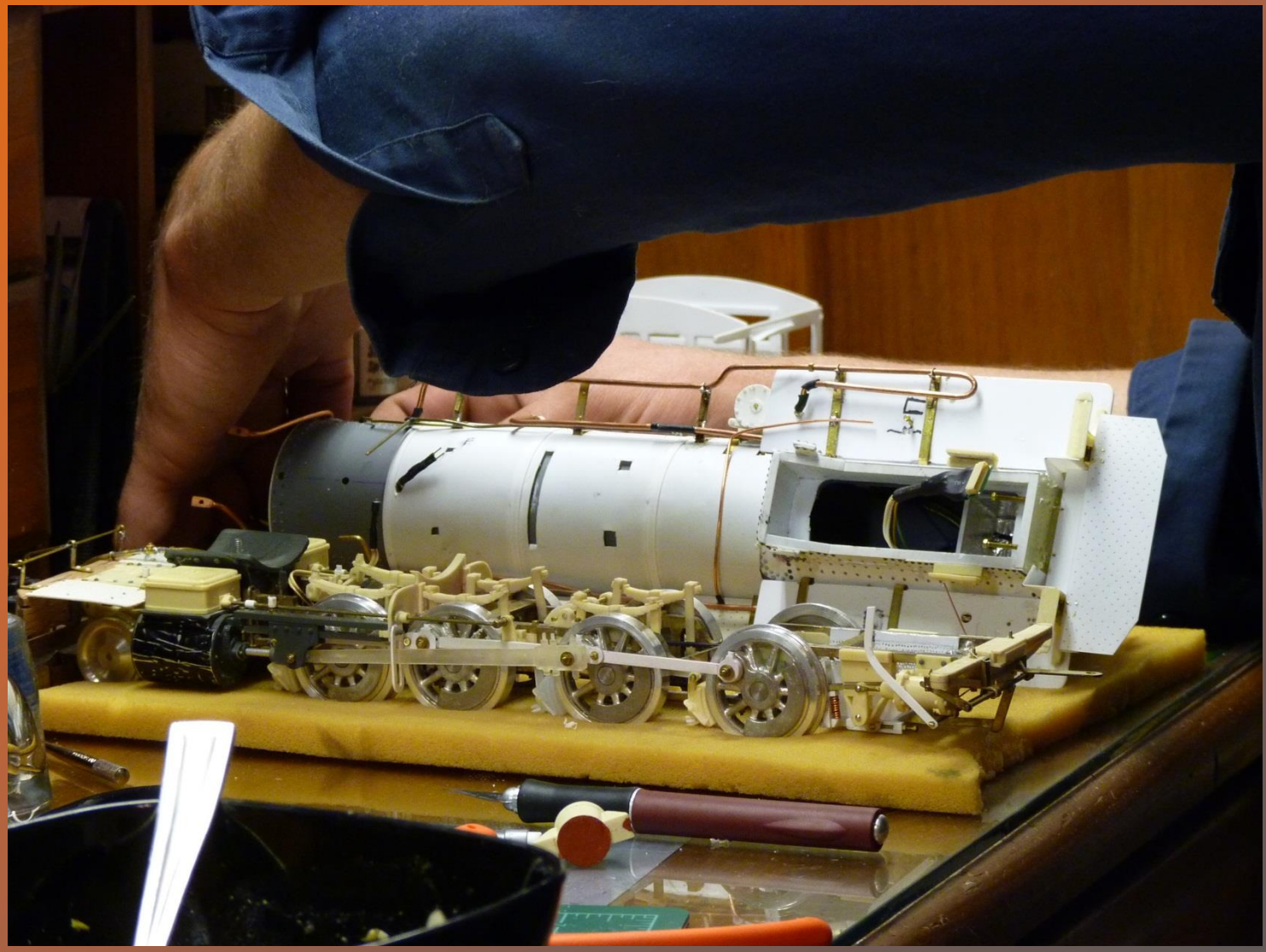


Construction

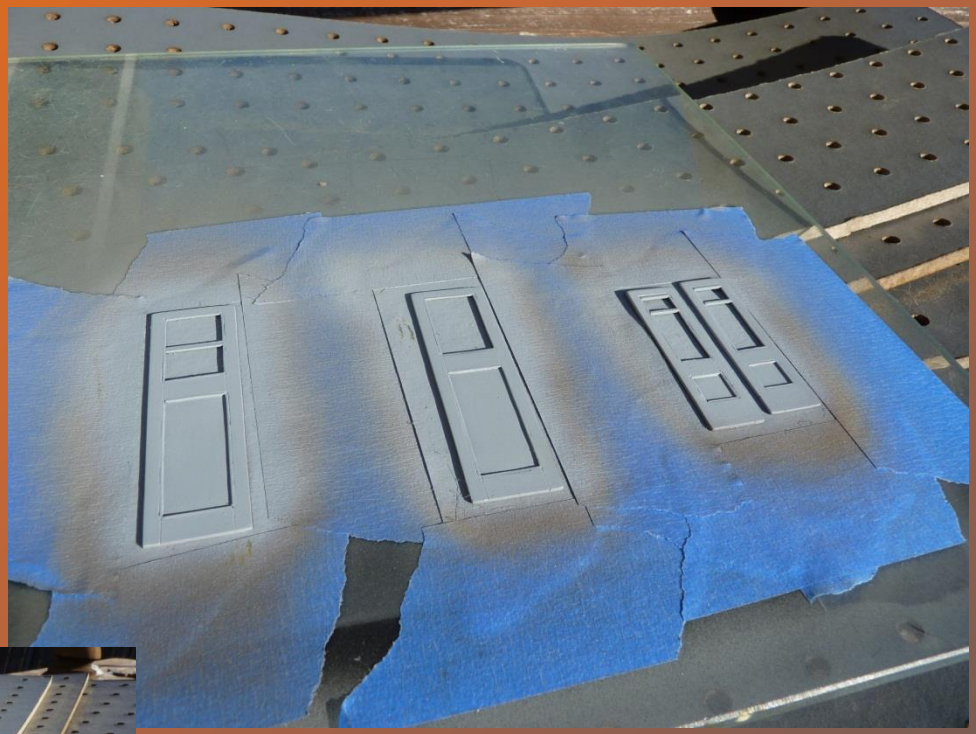
Electronics



Disassembly

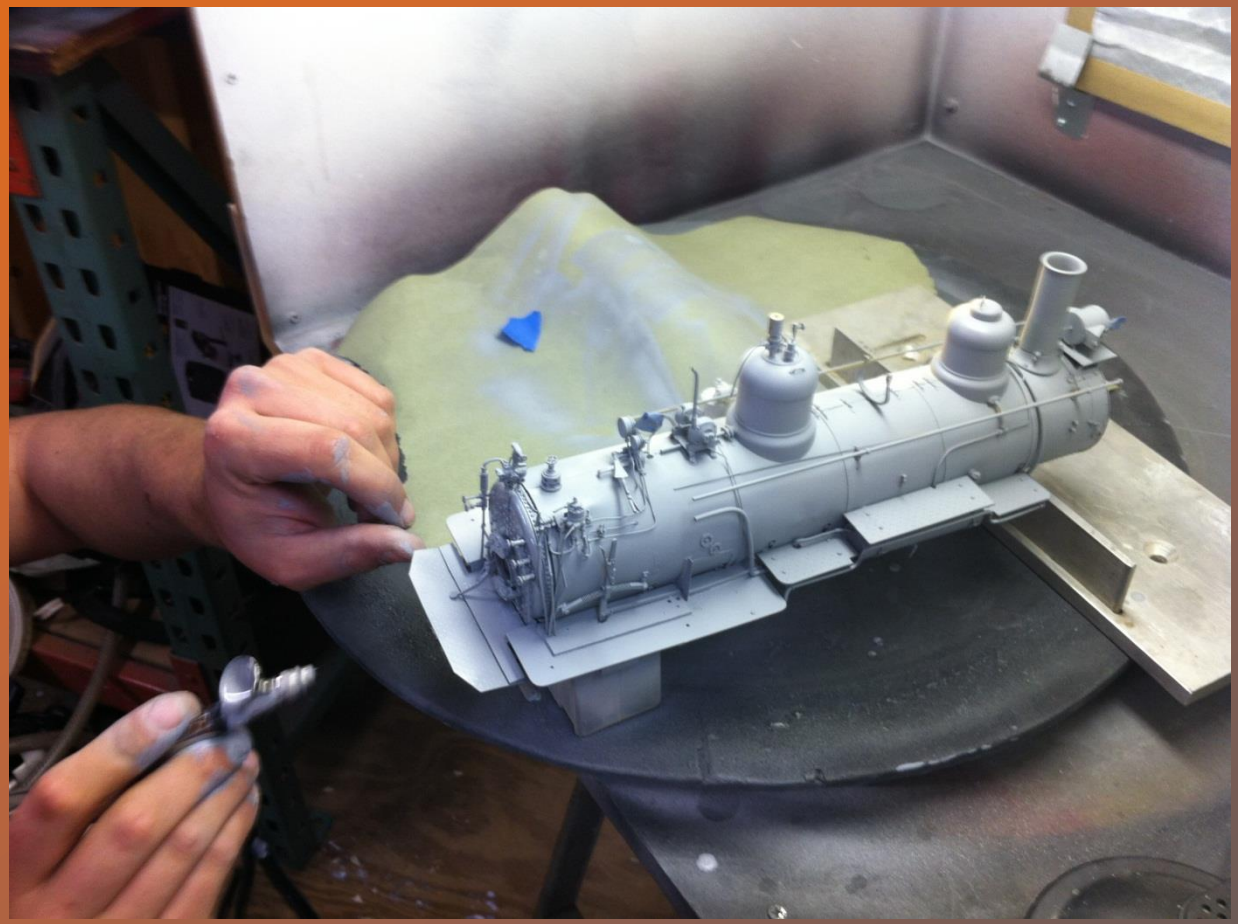


Everything gets primed



Everything gets primed

Everything gets primed **…Fingers included!**



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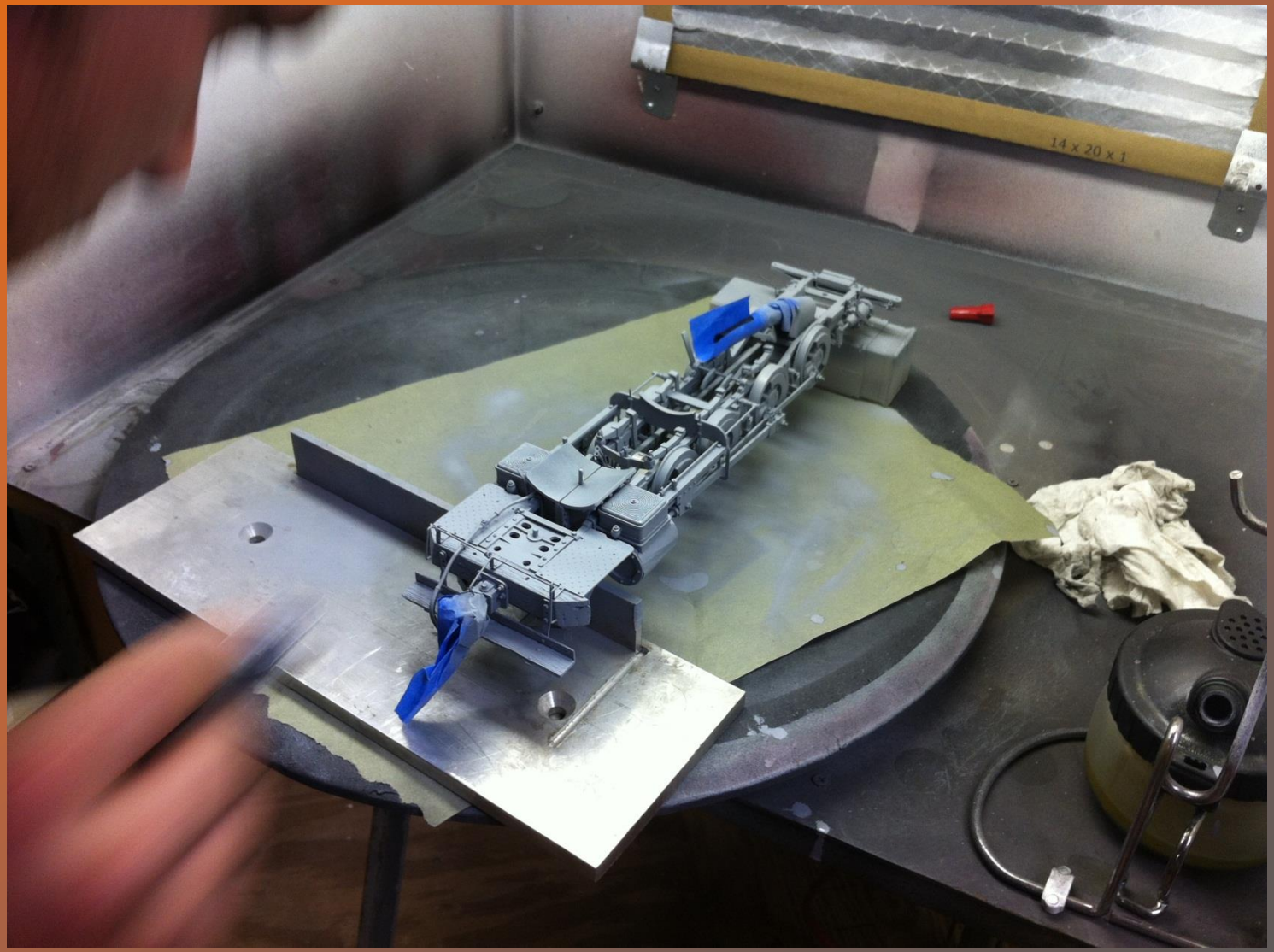
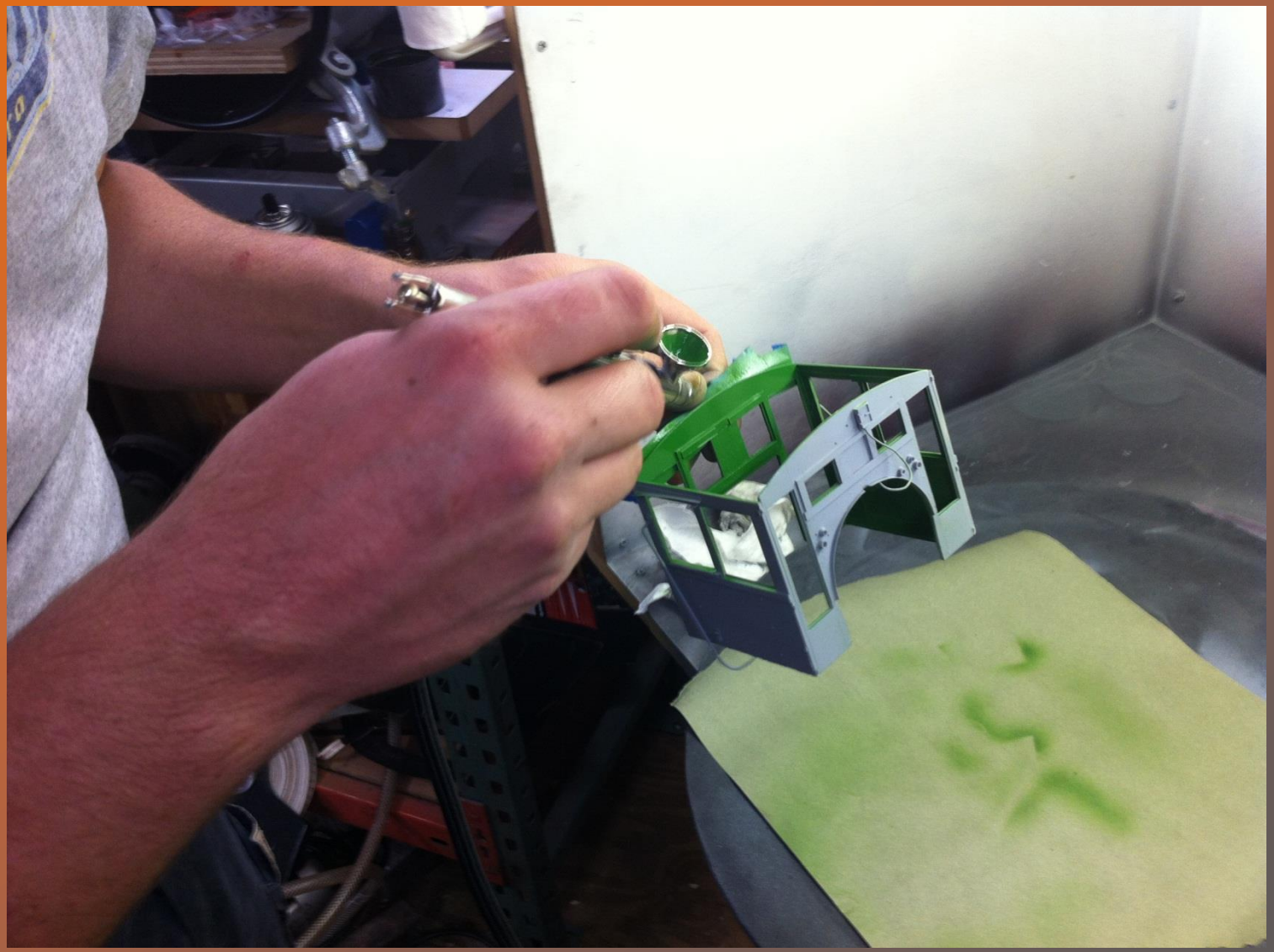


A touch of color



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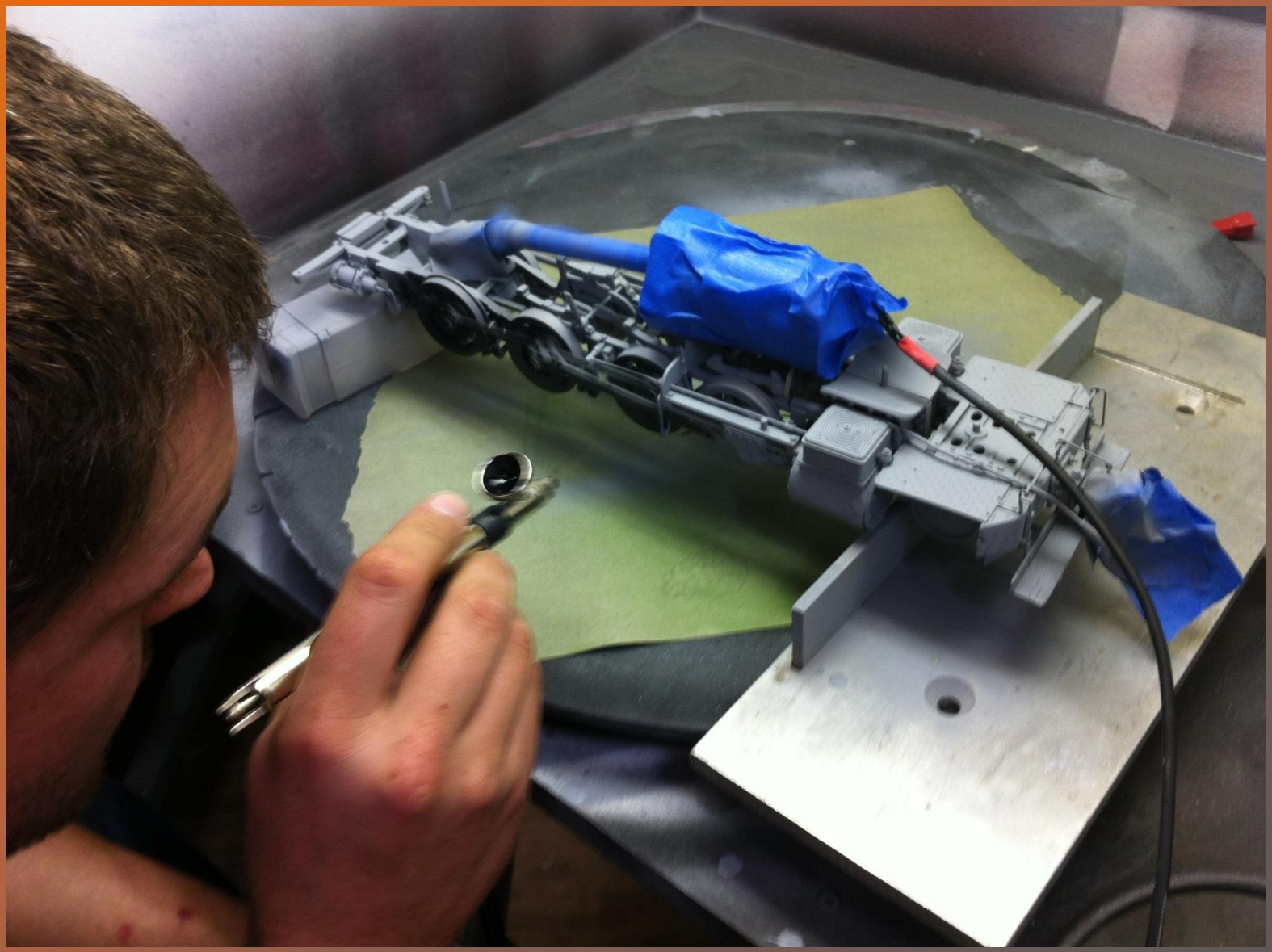

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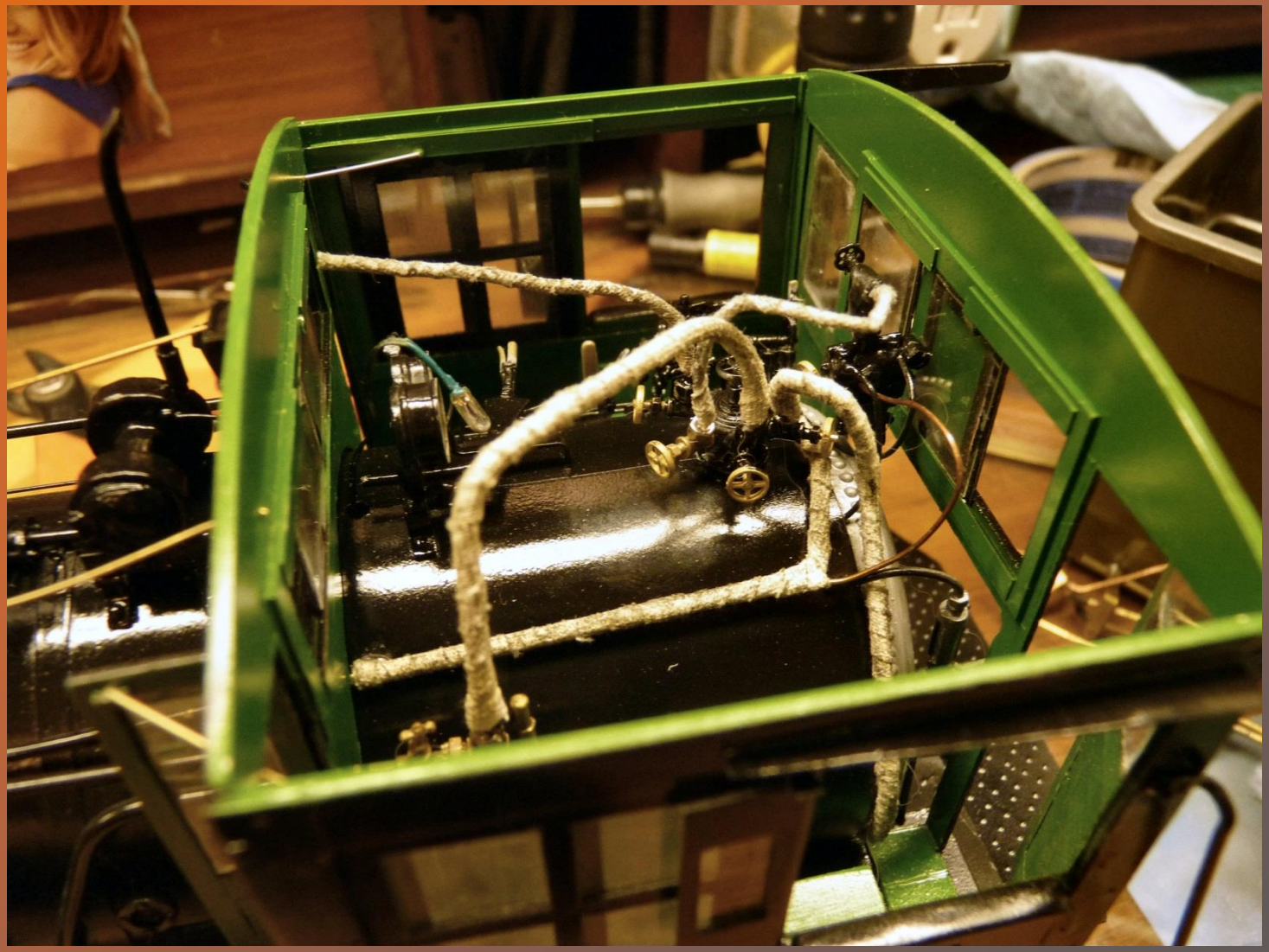
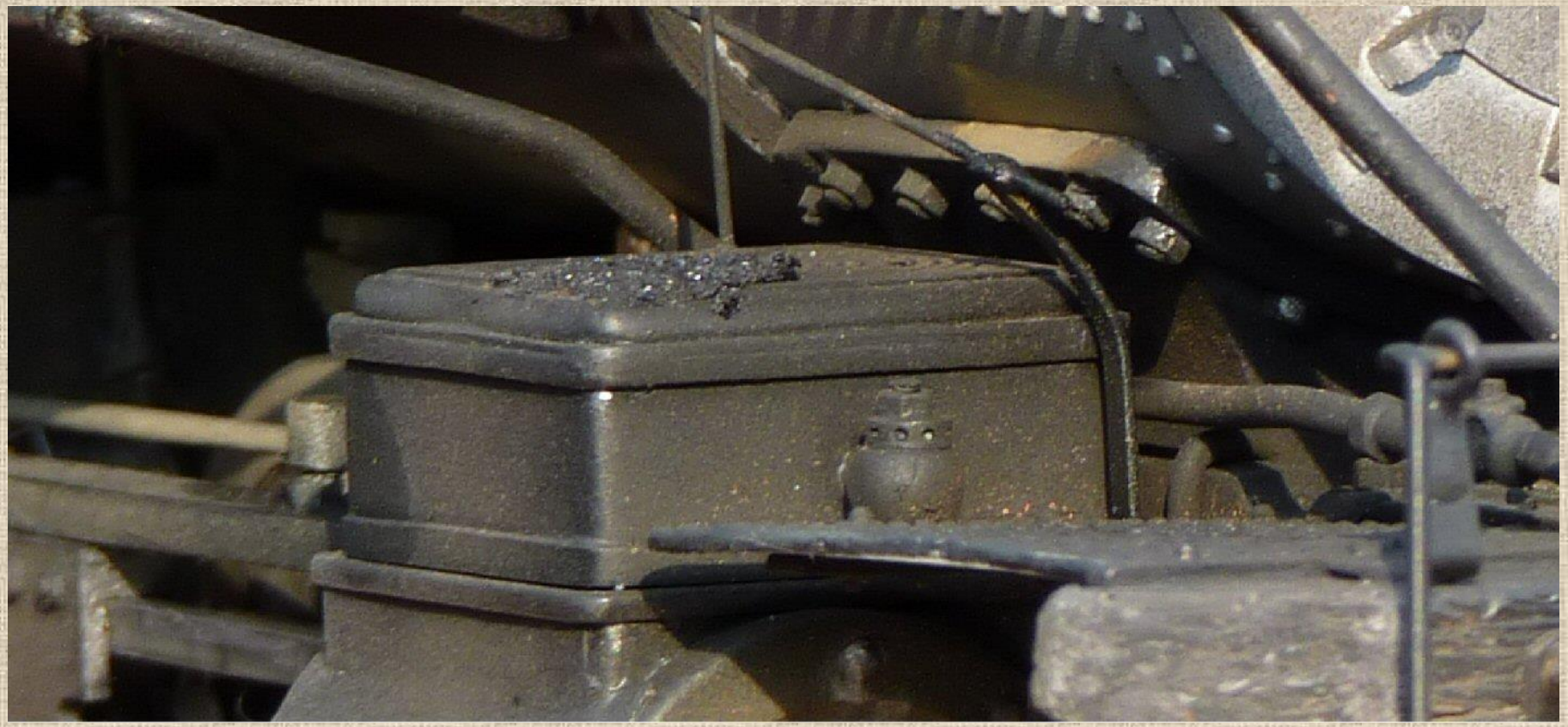


That’s too pretty!

Rub some mud on her

Rub some mud on her

Rub some mud on her



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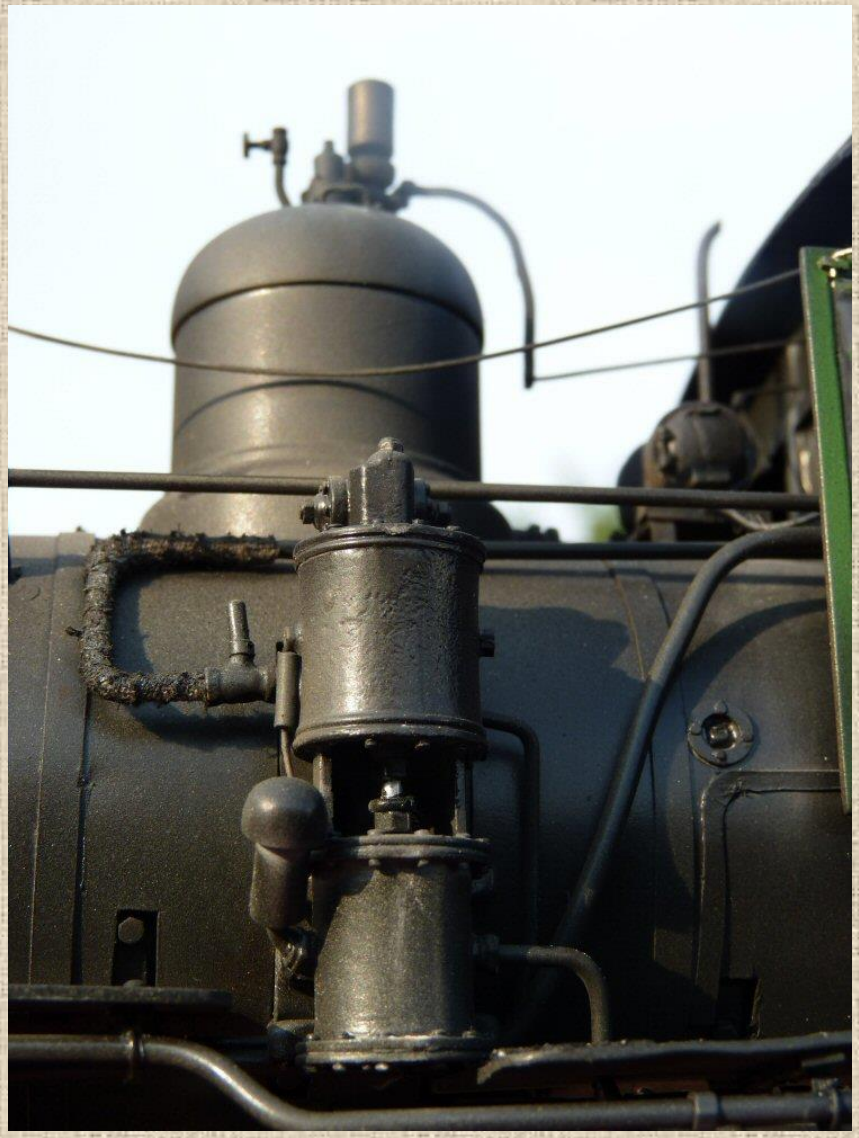

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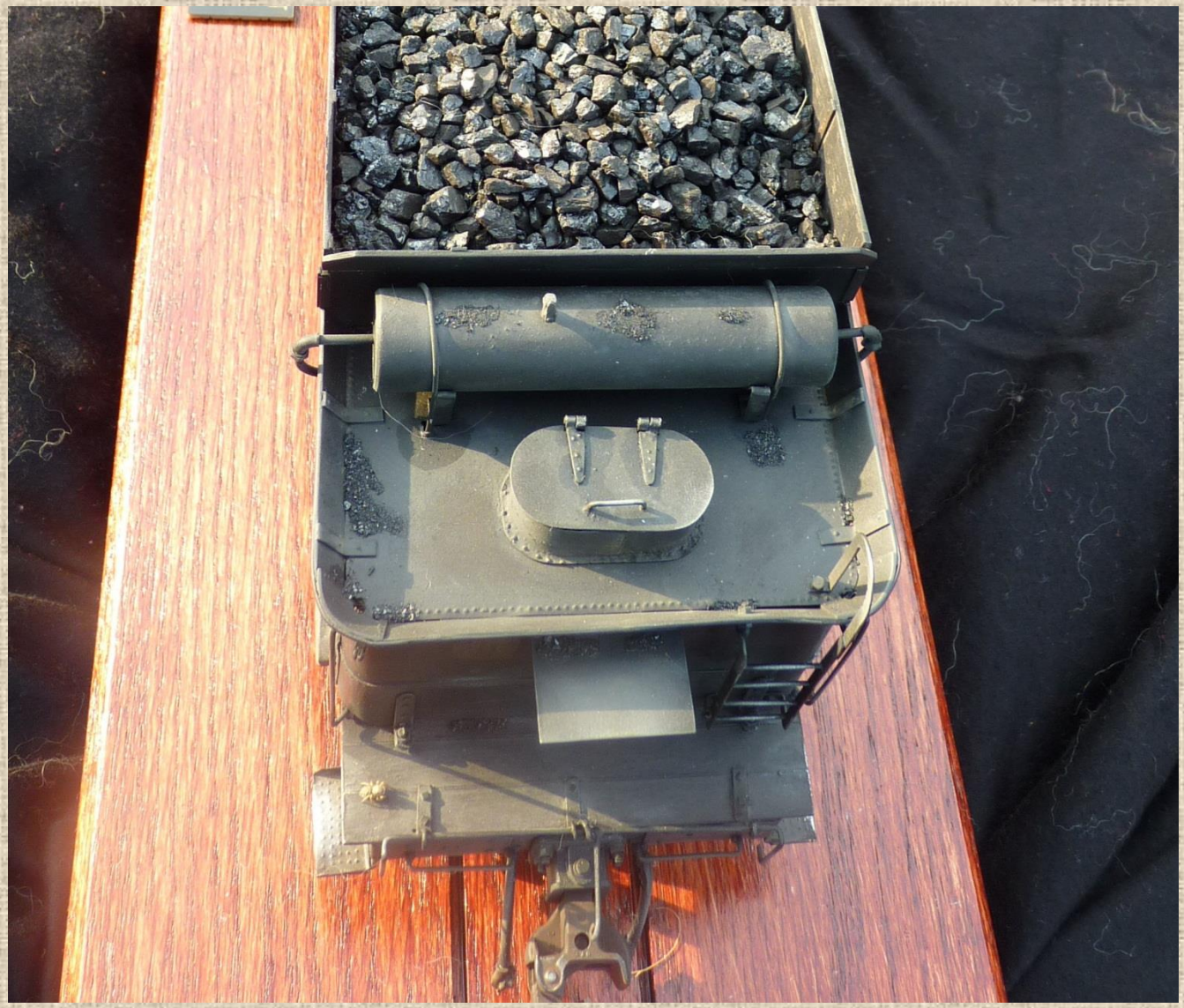

Rub some mud on her

Rub some mud on her

The End

Special Thanks to…

- David Akin
- NMRA
- Barry Bogs/Blake Bogs
- Narrow Gauge Gazette
- THANK YOU!!!